

# Rock Products

DEVOTED TO  
Concrete and Manufactured  
Building Materials

Vol. VII

CHICAGO, ILL., SEPTEMBER 22, 1907

No. 3

## CAROLINA PORTLAND CEMENT COMPANY

We are the largest distributors of Portland Cement, Lime Plaster, Fire-brick and General Building Material in the Southern States, and have stocks of Standard Brands at all of the Atlantic and Gulf Seaports, and at our interior mills and warehouses, for prompt and economical distribution to all Southern territory. Write for our delivered prices anywhere. Also Southern agents for the "Dehydratine's" waterproofing material. "Universal," "Acme" and "Electroid" Brands Ready Roofing. Get our prices.

Charleston, S. C. Birmingham, Ala. Atlanta, Ga. New Orleans, La.

## Vulcan Steam Shovels

Are digging Cement Rock without blasting and loading it on cars for the Burt Portland Cement Co. of Bellevue, Mich., for less than 12 cents per cubic yard, and they are operating the shovels at only half capacity. How much is it costing YOU? Better write today for information.

The Vulcan Iron Works Company,

129 Vulcan Place, Toledo, Ohio

## UNION MINING COMPANY,

Manufacturers of the Celebrated

**MOUNT SAVAGE**  
FIRE BRICK  
GOVERNMENT STANDARD.

DEVOTE a special department to the manufacture of Brick particularly adapted both physically and chemically to

**Lime Kiln and  
Cement Kiln  
Construction**

Large stock carried. Prompt shipments made. Write for quotations on Standard and Special shapes, to

**UNION MINING CO.,**

Mount Savage, Md.

CAPACITY, 40,000 PER DAY.  
ESTABLISHED, 1841.

## Northwestern Clay Mfg. Co.

New Windsor, Illinois.

J. O. FREEMAN,  
Genl. Mgr.

**Sewer Pipe**

An inquiry will  
be answered.

Drain Tile.

Works: Griffin, Ill.

## Ottawa Silica Co.'s Washed White Flint Sand

Is used for sawing stone in more than a dozen states. Cuts more and lasts longer than any other sand on the market. Unexcelled for Roofing, Facing Cement Blocks, White Plaster, etc. Freight rates and prices on application.

**OTTAWA SILICA CO., . . . Ottawa, Ill.**

**DEXTER** Portland Cement  
THE NEW STANDARD

Sole Agents **SAMUEL H. FRENCH & CO.** Philadelphia



**Phoenix Portland Cement** UNEXCELLED FOR ALL USES.

Manufactured by

**PHOENIX CEMENT CO.**

NAZARETH, PA.

Sole Selling Agent **WM. G. HARTMAN CEMENT CO.,**  
Real Estate Trust Building PHILADELPHIA, PENNSYLVANIA

## "RELIANCE" BELT ABSOLUTELY BEST

**Chicago Belting Company**  
MAKERS

67-69 South Canal Street,

SEND US YOUR SPECIFICATIONS.

CHICAGO, ILL.

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**STANDARD BRAND  
OF  
MIDDLE WEST.**

Specially Adapted to all Reinforced Concrete  
and High-Class Work.

**Alma Cement Co.,**  
WELLSTON, OHIO

## Special Features in this Number.

Details of Construction of the North Pier at Chicago.  
The New McKinley Bridge at St. Louis.  
Development of Concrete Construction in Nashville.  
New Lime Hydrating Plant at Oakfield, Wis.  
Completion of the Plant of the Superior Portland Cement Co.  
"Scribo" among the Dealers of Ohio, Missouri and Illinois.  
Quarterly Meeting of the Association of American Portland Cement Manufacturers.

## Improved Shield Cement

The Best Natural Cement  
With 3 parts sand—425 lbs. 1 year.  
Economical for Concrete.

**LAWRENCE CEMENT CO.**  
OF PENNA.

SIEGFRIED, PA.

PAMPHLET FREE.



## THE SIDEWALK BRAND

SUCCESSFULLY USED FOR TEN YEARS IN ALL KINDS OF CONCRETE WORK

Send for 72 Page Illustrated Catalog No. 25

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Marquette Building, Chicago



## A STANDARD PORTLAND FOR UNIVERSAL USE

PRESENT  
DAILY OUTPUT  
6,500 BARRELS  
INCREASING  
TO  
17,000 BARRELS



PLANTS  
AT  
CHICAGO  
AND  
PITTSBURG

UNIVERSAL PORTLAND CEMENT CO.  
CHICAGO PITTSBURG

### Use "LIMOID" in CONCRETE and CEMENT MORTAR

FOR ITS

Waterproofing and Smooth Working  
Qualities and General Economy

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Land Title Bldg., Philadelphia

Wilmington, Del.

## "LEHIGH" PORTLAND CEMENT

High Tensile Strength, Finely  
Ground, Light and Uniform in Color.

MANUFACTURED BY THE

**Lehigh Portland  
Cement Co.**

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Western Office:  
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Write for Catalogue.

Capacity, 8,000,000 Yearly.



Manufacturers: Sales Office, Holland Building, St. Louis.

## Buckeye Portland Cement Co.

ESTABLISHED 1888.

Manufacturers of the celebrated  
"Buckeye" brand of



### Portland Cement

"Buckeye" has stood the wear and tear in many  
important places for the past fifteen years and  
under the new process of manufacture is now  
better than ever. :: :: :: :: ::

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CORRESPONDENCE.

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The Recognized Standard  
American Brand.

General Offices: EASTON, PA.

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## Chicago Portland Cement Co.



MANUFACTURER OF...

"CHICAGO AA"  
PORTLAND CEMENT.

We make one brand only.

The best that can be made.

## HYDRATED PORTLAND LIME

IS IDEAL FOR

**Waterproofing  
Concrete Blocks**

SAVES MONEY. TRY IT.



FOR INFORMATION AND PRICES, WRITE

**CHICKAMAUGA CEMENT CO.,**

Sole Manufacturers.

CHATTANOOGA, TENNESSEE



E



# Rock Products

DEVOTED TO  
Concrete and Manufactured  
Building Materials

Volume VII.

CHICAGO, ILL., SEPTEMBER 22, 1907.

Number 3.

## NORTH PIER OF CHICAGO HARBOR.

Type of Modern Marine Engineering Practice by the Great Lakes Dredge and Dock Company, under Government Supervision.

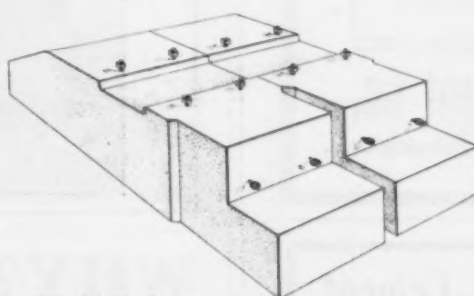
The reconstruction of the north pier, protecting the northern entrance to Chicago harbor, is an important concrete operation of the present year, and typical of the best engineering development to date as applied to harbor improvements in the Great Lakes, as well as having a general bearing upon the needed improvements in rivers that are naturally navigable for a part of the year at least. There is a long list of similar permanent improvements which should and certainly will be undertaken in the near future.

The natural harbor which first beckoned commerce to build a city was afforded by the mouth of the Chicago River, offering a safe landing for vessels under favorable weather conditions. As early as the middle of the last century the first harbor improvements, under the direction of the United States Engineering Corps, were begun. For the protection of the north bank of the river from northerly and easterly winds and the attendant rough water, so as to make the entrance to the harbor available to ships at all times, a cribbing consisting of two rows of wooden piles and filled with compacted rubble stone between the rows, was provided in 1867 as a breakwater pier, and the harbor light was placed at the eastern end of this pier. It is 1,000 feet long, extending due east and west, its western extremity resting upon the northern edge of the mouth of Chicago River.

A few years later it was found that this north pier was often called upon to withstand the strain of continual heavy seas, produced by the prevailing northerly winds, beyond its calculated capacity. Consequently an exterior breakwater was constructed at a later period for the further protection of the harbor entrance as well as to relieve the north pier. The center of the exterior breakwater lies 3,000 feet northeast from the lighthouse at the end of the north pier, and from that point it extends in a straight line one-half mile southeast and one-half mile northwest, making a protection one mile in length opposed to the average direction of the winds and the seas which have always been the problem for engineers working out improvements for the entrance to Chicago harbor. The importance of the maritime interests centering at Chicago are little appreciated, and they are few who know that the Port of Chicago ranks second only to New York in point of tonnage.

About one year ago, the Government contracted with the Jackson-Corbett Company of Chicago for the reconstruction of the north pier with concrete according to designs and specifications furnished by the engineering department under Lieutenant Colonel W. H. Bixby, District Engineer.

The task undertaken by the contractors to remove a damaged part of the old cribbing and to replace it with new work; to repair the whole submarine structure in such a way as to produce a perfect job; to construct a concrete foundation at the water line with a superstructure of sufficient height and strength to shelter the harbor entrance completely, and to provide



TYPICAL PAIR OF 10-TON FOUNDATION BLOCKS SHOWING MOLD FOR THE MONOLITHIC TONGUE.

a passageway for reaching the light at the eastern extremity of the pier in the shape of a continuous tunnel. Thus the pier, when completed, will consist of heavy timber cribbing filled with rubble stone under water and the entire length of 1,000 feet will be capped with heavy concrete masonry at the water line upon which an arch as long as the pier will be constructed, the height of which will be about 10 feet above the water line, and probably higher than the wash of even the fiercest storm.

The Jackson-Corbett Company, who nominally have the contract with the Government, sold their entire marine plant and turned over the actual construction work to the Great Lakes Dredge and Dock Company of Chicago, which concern began active operations in May of the present year, placing William Murphy, a gentleman well equipped with long experience in this very class of work, as superintendent in charge.

It was a long and arduous task to pull out and replace the condemned portion of the old cribbing, the peculiar weather conditions of the early part of the present season contributing a drawback to the already difficult task. It was not until the first of July that the cribbing foundation was in condition to begin the concrete work.



SPREADING THE CONCRETE IN ONE OF THE SECTIONS BETWEEN FOUNDATION BLOCKS.

This is the part of the undertaking in which we are most deeply interested and consists of three distinct operations.

First, the manufacture and placing in position of two courses of heavy concrete foundation blocks, one row on each side of the pier, about 26 feet apart and fastened together by means of tie rods, in such a way as to form two continuous foundations of the concrete blocks, each resting upon the outer edges of the cribbing.

Second, the filling of the space between these two rows of foundation blocks with mass concrete, dressing the concrete floor level with the top of the foundation blocks, which is about two feet above the water line, and thus practically making this entire water line foundation monolithic in character, for the opposite blocks are tied together by means of tie-rods imbedded in the mass concrete, while between every pair of blocks as set in the foundation is provided a tongue of concrete, which is also a part of the mass joining the two rows of the blocks.

Third, the concrete superstructure, which will consist of side walls and roof built of concrete molded in mass so as to form a continuous arch resting on channels provided in the two side rows and two end walls of foundation blocks, and leaving the walls and roof of the superstructure a passageway, the floor of which is the top surface of the concrete joining the two side rows of foundation blocks.

G. A. M. Liljencrantz, United States Engineering Department, is assistant engineer having supervision of the north pier construction work, with Harry Lello as principal inspector, while William J. McCarthy is the construction engineer for the Great Lakes Dredge and Dock Company. These gentlemen are now actively engaged in pushing the work to completion before the season closes.

The concrete foundation blocks are cast in wooden molds made of heavy timbers and rigidly bolted together so as to give the prescribed shape as shown in the illustration. Each block measures 9 feet for the longest dimension, by 5 feet in width, and perpendicularly 3 feet. They weigh approximately 10 tons each. The outer water face of each block presents a one-foot perpendicular rise and a beveled wash of two feet. The opposite or inside end of the block is provided with iron staples molded into the concrete for the purpose of attaching the tie rods, which are provided with turn buckles so that the exact distance between the blocks can be finally regulated by the screws. The blocks are laid side by side as shown in the pair illustrated, and the indentation at both sides of the inner end is provided for in the mold. Forty such molds have been provided by the contractors and a Ransom mixing machine completes the outfit for making blocks.

The blocks are made of 1-2-5 concrete, Universal Portland cement being used, and crushed rock (2½-inch ring size), with all of the crushed product retained as it comes with the run of the crusher. The crushed rock is delivered in 500-ton barges from the Western Stone Company's crushing plant at Lamont, Ill., located on the Drainage Canal, the barges of

Continued on page 11.



## Reputation Unrivalled

**ONE BRAND ONLY**  
Sound, Strong, Uniform



ONE OF THE OLDEST AND THE BEST.

**Vulcanite Portland Cement Co.**

Flatiron Bldg., New York. Land Title Bldg., Philadelphia.

## Improved Utica Hydraulic Cement

The finest ground and highest grade Natural Cement manufactured in the U. S. Every car tested by Robt. W. Hunt & Co., and their test furnished on every car shipped.

**MEACHAM & WRIGHT CO.** Sole Agents, Chicago.

## BANNER CEMENT CO., MAKERS OF THE FAMOUS BANNER BRAND OF LOUISVILLE CEMENT.

Guaranteed that 90 per cent. will pass a  
ten thousand Mesh Sieve.

WE SELL TO DEALERS ONLY.

GENERAL OFFICE: MASONIC TEMPLE, CHICAGO, ILL.

## A CONCRETE ROOF THAT DOES NOT LEAK



## Medusa Water-Proof Compound

Makes all Concrete  
Impervious to Water

The concrete roof of the Herbivora Building at the Cincinnati Zoo, shown in this illustration, was made absolutely dry by applying a cement mortar containing Medusa.

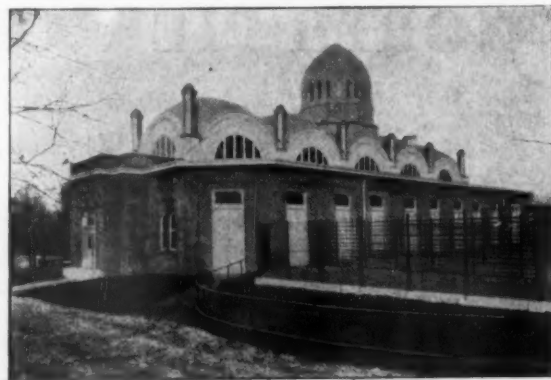
### It Does Not Affect the Strength of Cement

Write for pamphlets describing its uses.

## Sandusky Portland Cement Co.

SANDUSKY, OHIO

Beware of imitations and adulterated compounds that are sold for less than it costs us to make "Medusa"



## WHY?

## Egyptian Portland Cement

Every mason likes it.  
Works easy.  
Excellent color.  
High in tensile strength.  
Fine ground.  
Mill centrally located,  
Low freight rates.  
Popular price.

We can save you money

Write us your needs

## THE BARTLETT CO.

Mills: Fenton, Mich.

Sales Office, Jackson, Mich.



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UNEQUALLED FOR HIGH  
CLASS CONCRETE WORK

## Pennsylvania Cement Co.

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Tell 'em you saw it in ROCK PRODUCTS.



**Strength  
Durability  
Permanence**

Not only laboratory tests, but results in actual work prove the high grade quality of

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Especially adapted for Cement Blocks, Sidewalks, and all forms of concrete and re-inforced concrete construction.

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Works at Stockertown, Pa.

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700,000  
BARRELS  
ANNUALLY**  
  
OFFICE  
ALLENTOWN, PA.



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SPECIFICA-  
TIONS  
GUARANTEED**

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Prepared in any Color for Laying Pressed and Enameled Brick, Stone Fronts, Terra Cotta, Chimneys, Fire Places, Etc.

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The Potter Blackboard Material.

SOAPSTONE MICA. CONCRETE DRESSING.  
CRUSHED, GROUND AND BOLTED SOAPSTONE.

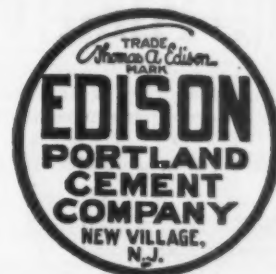
**AMERICAN SOAPSTONE FINISH CO.**

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**EDISON  
Portland Cement Co.**



85 per cent. thru 200  
98 per cent. thru 100

**The Finest Ground Portland  
Cement Manufactured**

"Neat tests are of less value than those of the briquettes made with sand and cement. The fineness of the cement is important, for the finer it is the more sand can be used with it."

[Abstract from "Specifications for Portland Cement," issued by the United States Navy Department, June 12, 1905.]

**FINE GRINDING  
OF  
PORTLAND CEMENT  
AND WHAT IT MEANS**

For a proper understanding and full appreciation of the importance of fine grinding, it is necessary to explain that Portland Cement (as manufactured in the Lehigh Valley) is made from what is commonly understood as "Cement Rock," with the addition of sufficient limestone to give the necessary amount of lime. The rock is broken down and then ground to a fineness of 80 per cent to 90 per cent through a 200 mesh screen. This ground material passes through kilns and comes out in clinker. This is ground and that part of this finely ground clinker that will pass a 200 mesh screen is cement; the residue is still clinker. These coarse particles or clinkers will absorb water very slowly, are practically inert, and have very feeble cementing properties. The residue on a 100 mesh screen is useless.

Edison Portland Cement is ground 85 per cent through a 200 mesh screen,—10 per cent finer than other brands. This can be verified in any laboratory.

In a barrel of Edison Portland Cement, therefore, you get 85 per cent of Portland Cement and 15 per cent of clinker. In a barrel of other brands you get 75 per cent of cement and 25 per cent of clinker.

If you are buying a ton of coal, would you buy the coal containing 25 per cent of slate, or would you prefer the coal containing but 15 per cent of slate?

If, instead, you are buying iron ore, would you not give preference to ore that contained 10 per cent more units of iron?

Another point is worth considering and that is that the Edison Portland Cement Company make but one brand or quality, and that is the best.

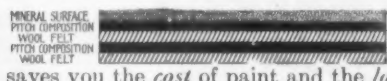
**SALES OFFICES:**

St. James Building, New York.  
Arcade Building, Philadelphia.  
Machensney Building, Pittsburgh.  
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## Paint! Paint! Paint!-Leak! Leak! Leak!

There is no reason in the world why you should buy a roof that *needs* painting. The *need* of painting is *proof* of weakness. It is not the *roof* that protects, it's the *paint*. If you forget to put the paint on, or for economical reasons omit doing so, you have a leaky roof; and a leaky roof is always an abomination.

Amatite roofing requires absolutely no painting or coating of any kind during its life. This diagram below tells you why.



saves you the *cost* of paint and the *labor* of putting it on.

If you want the best, most economical and satisfactory ready roofing made, *remember Amatite*.

**FREE SAMPLE.** Booklet about it and free Sample will be forwarded at once on receipt of your name and address. This is *proof positive* and you should send for it today.

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## A NEW FACTORY

devoted entirely to the production of

# AETNA DYNAMITE

Now enables us to fill orders promptly.

If you are blasting stone, try a lot of **Aetna 40% Gelatin.**

You will find it better than the other kind.

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"THE QUARRYMAN FINDS A NEW STANDARD OF QUALITY IN INDEPENDENT"



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COMPANY OF MISSOURI

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**DU PONT**  
**EXPLOSIVES**

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For Quarry Work and  
Railroad Construction

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# CHANNELERS

The "Monitor" Track Channeler possesses exclusive features adapting it particularly to heavy quarry work, where great speed and capacity with the minimum of repairs are essential. It is furnished in steam driven type with independent boiler, and in air driven types with or without reheater. The patented roller guide allows the cutting engine to run as free as a rock drill, giving "Monitor" Channelers a higher speed, a harder blow, a greater capacity and a higher economy than any other channeler. Other exclusive features are described in Catalog No. 60.

**Air Compressors**

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CO.**

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Butte  
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Five Monitor Channelers in a Bedford, Ind. Quarry.

I-31

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For Cement Works, Lime Kilns, Cupolas, Steel and  
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**Louisville Fire Brick Works,** K. B. GRAHN, Prop.,  
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## HENRY S. SPACKMAN ENGINEERING CO.

Official Chemists, National Association of Manufacturers of Sand Lime Brick.

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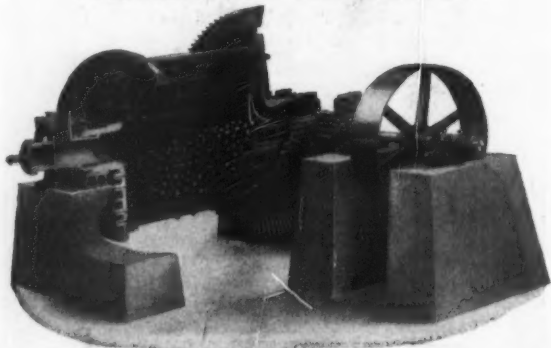
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a specialty.

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FOR EITHER WET OR DRY METHOD OF MANUFACTURE

CRUSHERS—DRYERS—KILNS—COOLERS  
TUBE MILLS—BALL TUBE MILLS, ETC.



Our Ball-Tube Mill shown above is a distinct innovation in the line of cement-making machinery, and is destined to entirely replace the old-time ball mill for the coarse grinding of cement clinker, because of its much greater grinding capacity per horse-power and the extremely low cost for repairs.

**NO SCREENS TO CLOG OR WEAR OUT  
THEREFORE NO SHUT-DOWNS**

Our entire line of Cement Mill Machinery is distinctive in character and design and is acknowledged by discerning engineers to be superior to any other on the market.

Our new Catalog No. 7 gives full and complete details. Send for it.



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Southern Representatives: W. E. Austin Co., Atlanta, Knoxville, Birmingham.

## FACTS—About the Tube Mill or Pulverizing Cylinder

1869—Invention:—Mr. J. R. Alsing, founder of this concern, was the inventor and introducer of the Pebble Pulverizing Cylinder (Tube Mill) in the United States.

1890—First mill for grinding cement:—The J. R. Alsing Co. were the first concern to install the Pebble Pulverizing Cylinder (Tube Mill) in the cement industry.

Now universally used for grinding cement.

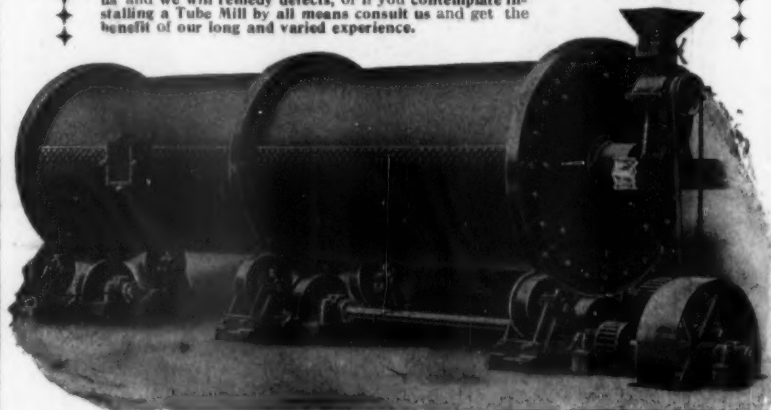
1893—Inventors of the continuous feed and discharge device:—The J. R. Alsing Co. were the inventors and patentees of the Continuous Feed and Discharge Device on Tube Mills.

1894—First Mill for Milling Ores:—The J. R. Alsing Co. were the first to introduce the Pebble Pulverizing Cylinder (Tube Mill) in the mining industry with the Moulton mill, of which Senator Clark of Montana was president.

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1906—Largest Tube Mill Ever Built in the World:—The J. R. Alsing Company built the Largest Tube Mill Ever Built in the World.

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For Mines, Quarries and Stone Crushing Plants

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Trade-Mark.

Tell 'em you saw it in ROCK PRODUCTS.

## Economy Dictates

that the jaw-plates, cheek-plates, cones and concaves of  
your crushers should be made of

"Taylor-Made" **Manganese Steel** "Taylor-Made"



The actual ratio of wear in "Taylor-Made" plates, as compared with other castings, has been proved by large users in hundreds of cases to warrant their use.

**"The Reason's in the Steel"**

We shall be pleased to give you further information.

**Taylor Iron & Steel Co.**

High Bridge, N. J.

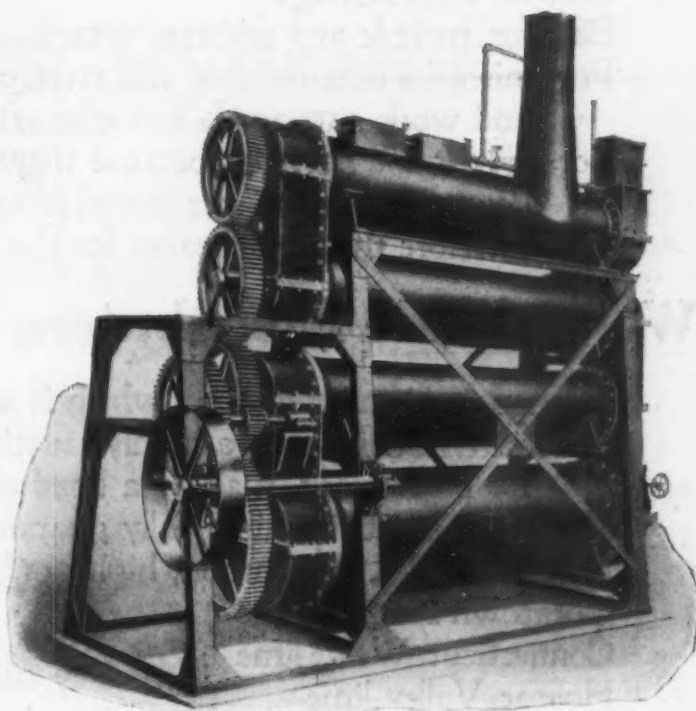


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Past experience counts as much in solving lime problems as in anything else. The owner, manager, superintendent are too much occupied with the manufacturing and commercial branches of the business to give the necessary time to decide what system of hydrating will best suit the mineral conditions of his particular lime. You cannot adopt a method which is proving a success somewhere else, as local conditions are not identical.

It is only through our unusually wide experience that we are enabled to build a successful system of hydrating which every lime plant requires. This knowledge leads to lower productions, costs, larger profits and sales.



The Kritzer Continuous Hydrator.

Why Not Accord Us an Interview or Send for the Little Booklet on Hydrating Lime?

# THE KRITZER COMPANY

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Why are the Palmer Lime & Cement Co.'s Limes in demand?  
Why are they used in all principal buildings in New York, Brooklyn and neighboring cities?

Because they are the **best**.

Best for **finishing**.

Best for **brick** and **stone** work.

For finishing, because they will **not** pit, will **not** follow the trowel, and work **smooth** and **clean**.

For **brick** and **stone**, because they are strong, large yielders, and will lay **more** brick per barrel than any other lime on the market, therefore they are cheaper for the mason's use.

## We are Sole Distributers of the—

**Cheshire** finishing lime, which is well known and always A 1.

**Bellefonte Lime**, a highly caustic chemical lime, and a large yielder for brick work, making a bond almost equal to cement mortar.

**Palmer** select finishing, fully guaranteed.

**Palmer No. 1** common, high grade for brown and scratch coats.

Yorktown Heights lime

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} Especially adapted to brown and scratch coats.

## And—

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**Alsen's** American Portland Cement, for Long Island.

We **succeed** in pleasing our customers.

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## The Clyde Hydrator

is the accepted standard of highest efficiency, economical operation, positive results and general all around serviceability in hydrating machinery

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They have proven their merit under all conditions

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*"We like to answer questions"*

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**PRODUCER GAS**  
Makes the Best Lime  
It Increases the  
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The Total Cost of  
This Installation  
Will be Paid for by  
the Saving Effected  
During the First  
Year of Operation

"We have equipped two plants for above company and are now equipping a third."

**MORGAN CONSTRUCTION CO., Gas Producer Dept., Worcester, Mass.**

Do You Have Cars to Haul?  
**The Davenport Locomotive**  
Will Save Money



Special Designs for Special Purposes  
Any Size, Any Gauge, Any Weight  
Write for Prices and Particulars

**DAVENPORT LOCOMOTIVE WORKS**  
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### Louisville Hydraulic Cement

is especially adapted for use in all classes of masonry construction and concrete foundations, and for all purposes where large masses of mortar or concrete are not exposed to the weather.

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**W. B. E.**

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**Bitumen Emulsion**  
A PERFECT WATER-PROOFING  
for CEMENT or CONCRETE WORK

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W. B. E. Bitumen mixed with Cement mortar and correctly applied produces results and advantages as follows: 1. Makes walls or floors absolutely dry and watertight against pressure. 2. Is acid proof (except against concentrated acids of the strongest kinds.) 3. Can be applied in freezing weather. 4. Resists heat well, almost to red hot. 5. Sets well, does not crack nor shale off. 6. Destroys and prevents fungus in damp basements and cellars. 7. Adheres very well to clean rough walls of brick, stone and concrete. 8. Can be applied as plaster, against walls through which water is oozing out. 9. Prevents efflorescence or alkali on walls.

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## BAUXITE

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Blocks

In hot zone and our special fire-clay blocks throughout the rest of Kiln can be run from three to four times as long as Kilns lined with the very best fire-clay linings. Write for booklet describing Bauxite Linings for Portland Cement Rotary Kilns.

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**Largest Capacity of Hydrated Lime in the U. S.**

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**Lime, Lumber, Sewer Pipe and a Full Line of  
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PRODUCTS**

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Polar Bear Lime

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Polar Bear Hard Wall  
Plaster

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WE MAKE IT."

**Lump - Barreled - Hydrated Ground.**

**STRONGEST IN OHIO.**

**We are not connected with any Trust or Combination.**

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PHONE US

**The Scioto Lime and Stone Company, Delaware, Ohio**

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Buff and Black  
MORTAR  
COLORS



The Strongest and Most Economical in the Market.

Our Metallic Paints and Mortar Colors are unsurpassed in strength, fineness, and body, durability, covering power and permanency of color. Write for samples and quotations.

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Rigid  
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Easy to apply  
economical to plaster over—  
very sheet perfect  
Self-furring  
surpassingly fine for  
tucco exterior work

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Highest standard of excellence in Black, Red, Buff, Brown and Purple.

Roofing of All Kinds Manufactured by

**The Garry Iron & Steel Company**

Eastern Office: 1123 Broadway, New York City. CLEVELAND, OHIO

DOES NOT DETERIORATE WITH AGE.



WILL NOT SLACK. ALWAYS READY FOR USE.

## Excelsior Hydrated Lime

A PRODUCT OF MERIT.

The best prepared Lime in the market. Is superior to hot Lime for all purposes. Will not deteriorate. Absolutely pure and free from foreign ingredients. Successfully used for years by the largest users of Hydrate in the country.

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MADE ONLY BY

**The Cleveland Builders Supply Co. Cleveland, O.**

Try us on your Portland Cement requirements

## Farnam "Cheshire" Lime Co.

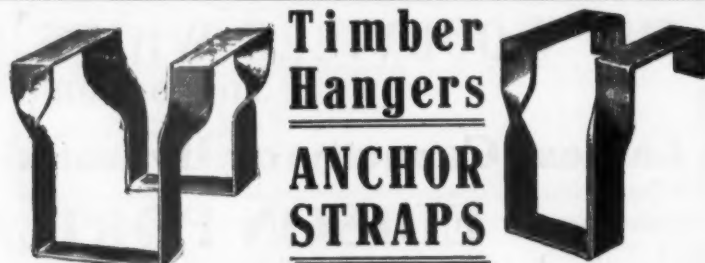
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MANUFACTURERS OF THE

### Celebrated "Cheshire" Finishing Lime.

Well known throughout New York and the Eastern States as the finest finishing lime manufactured. The special feature of this lime is its quick and even slacking, thus preventing any cracking or checking when put on the wall. It is the best lime used in the country today for all

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Selling Department, 39 Cortlandt St., N. Y., C. J. CURTIN, Pres't.



For Wood, Steel or Concrete Construction. Special Hangers to suit any conditions:

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### ....High-Grade Finishing Lime....

Noted For Its Quick and Even Slacking.

Now in Use in Some of the Largest Buildings Being Erected in New York City.

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CLEVELAND, OHIO.

**Tiger Brand White Rock Finish the best known and smoothest working Hydrated Lime manufactured.**

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**THE LARGEST LIME MANUFACTURERS IN THE WORLD.**

# A. & C. Stone & Lime Co.

MANUFACTURERS OF

## CRUSHED STONE AND WHITE LIME

TOTAL CAPACITY CRUSHED STONE 4000 TONS DAILY.

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RIDGEVILLE, IND.  
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LIME KILNS AT  
PORTLAND, IND.

General Office: 17 N. Penn. Street  
INDIANAPOLIS

## The Strongest White Lime

ON THE MARKET

Uniform Quality

Finest Grain

The American Clay Machinery Co.  
WILLOUGHBY, OHIO

May 16, 1906.

The Mitchell Lime Co.,  
Mitchell, Ind.

Dear Sirs:-

Replying further to your favor of the 8th inst requesting us to advise you the result of practical test of your lime in the manufacture of sand-lime brick. We are pleased to advise you that the lime hydrated easily and the brick made from it were first-class in every respect.

We have forwarded some samples of it to Mr. Elkus of the Indianapolis Composite Brick Co. and he can probably advise you further.

Very truly yours,  
The American Clay Machinery Co.  
by W. J. Burke.

**MITCHELL LIME COMPANY**  
MITCHELL, INDIANA

## WESTERN LIME CO.

HUNTINGTON, INDIANA

MANUFACTURERS OF

### LUMP LIME

ALSO, DIAMOND BRAND SUPERIOR WHITE FINISH

### A HYDRATED LIME

AND A GROUND AND FERTILIZER LIME

Capacity 4,000 barrels or 10,000 bushels per day. Capacity of Hydrated Lime, 120 tons per day. Our LUMP LIME as well as our HYDRATED LIME is the very best obtainable for all purposes for which a good lime is needed in erecting buildings. Our HYDRATED LIME is absolutely the best finishing lime on the market.

## FOWLER & PAY,

Brown Hydraulic Lime, Austin Hydraulic Cement, Jasper Wall Plaster, Brick, Stone.

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PLASTER MILL: Ft. Dodge, Iowa.  
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ASH GROVE  
WHITE LIME ASSOCIATION  
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**High Grade  
White Lime.**  
KANSAS CITY, MISSOURI.

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## Modern Grinding Machinery

**KOMINUTERS** for granulating  
**TUBEMILLS** for pulverizing

**Daidsen Tubemill** especially  
adapted for Sand-Lime  
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**Silex Linings** for Tubemills  
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 The All Steel Wheelbarrow for Feeding  
Power Driven Concrete Mixing Machines  
Has Not a Single Rival on the Market



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Manufactured by

**The Ohio Steel Wheelbarrow  
Company**

No. 25-35 SOUTH ST. CLAIR STREET  
TOLEDO, OHIO, U. S. A.

## ROCKLAND-ROCKPORT LIME

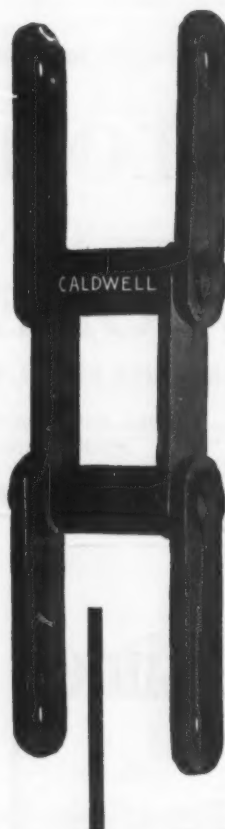
The sand capacity is immense. Produces a rich mortar with great spreading qualities. A saving of labor and material. Sold by all the best building material dealers.

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## MACHINERY

FOR

### Industrial Plants



We manufacture machinery for transmitting power, and for elevating and conveying materials in and about cement plants, rock-crushing plants, lime plants, mortar works, plaster works, and other industries.

We manufacture screw conveyors, belt conveyors, and all sorts of chain and cable conveyors, for handling rock, lime, sand, etc.

We manufacture elevators, also, for handling the same kinds of material.

Our lines include shafting, couplings, bearings, collars, pulleys, gears, rope sheaves, sprocket wheels, elevator buckets and bolts, steel elevator casings, etc.

We have our own foundry, sheet metal department and machine shop. We employ first-class help in all departments and use high-grade materials.

When you are in need of anything in our line, try us.

Catalogue No. 28.

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### Lime Kilns and Complete Lime Plants

Plans and estimates furnished for coal, wood or producer gas kilns. Designers and builders of the only known kiln that will burn a soft stone economically. Sixteen years' experience. Contracts taken in any part of the country. :: :: ::

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**RHOADS**

**LEATHER BELTING**

**The Test of Service is All Right.**

We invite comparison of our Belting with other belts by actual use.  
 "The proof of the pudding is in the eating."  
 Our guarantee makes a trial order a safe investment.

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**USE RHOADS BELT DRESSINGS**

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**T**HE conditions required for the development of the highest efficiency in the burning of coal are—the complete oxidation of each carbon particle to  $\text{CO}_2$  and the absence of any excess of air over 150 cubic feet per pound of carbon.

To reach this efficiency it is essential that the supply of air necessary for the combustion of each carbon particle shall surround it and shall have free access to its surface.

The Aero Pulverizer receives any grade of coal, grinds it to an impalpable powder, intimately mixes the powder with the amount of air theoretically required for perfect combustion and delivers the mixture to the furnace, where smokeless combustion at the highest efficiency results.

Coals containing an ordinary amount of moisture can be handled by the Aero without previous drying.

An entire pulverizing plant is concentrated in one machine, saving in investment, space required and power consumed.

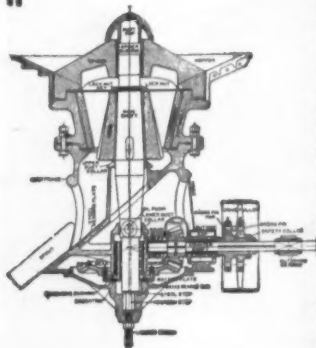
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**THE AERO PULVERIZER CO., 82 Wall Street,  
NEW YORK.**

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## THE AUSTIN GYRATORY CRUSHER IS THE ONLY ONE HAVING AN AUTOMATIC OILING SYSTEM.



The strain on the bearings of a gyratory crusher is so great that if dust reaches them or if imperfectly lubricated they are certain to be quickly destroyed and the machine laid up for repairs. The bearings of the "Austin" are enclosed in a double chamber—absolutely dust proof—and are lubricated by a constant circulation of live oil forced through the main eccentric bearing—which is the life of the machine—by an automatic pump operated directly by the gyratory movement of the main shaft. The lubrication must be perfect because the flow of oil is constant and positive.

In all other gyratory crushers there is only the discharge diaphragm to separate the dust from the bearings and gears, and a side door opens directly into the chamber containing the bearings. Dust gets into this receptacle readily and destroys the gears.

Immediately below the crushing head, in the "Austin" is placed the discharge diaphragm with dust collar the same as in any other gyratory crusher. Below this partition is a second diaphragm also provided with dust collar around the shaft and a dust cap covering the pinion, contained in no other crusher, en-

closing the bearings in a double dust proof chamber and making it simply impossible for dust to reach the bearings.

At the bottom of the frame in the "Austin" is an oil cellar which is filled with oil to the level of the center of teeth in the main gear.

An automatic pump draws pure oil from this cellar, forces it through the eccentric and counter shaft bearings and any oil thrown from the teeth of the driving gear is caught by the cap and carried back to the cellar.

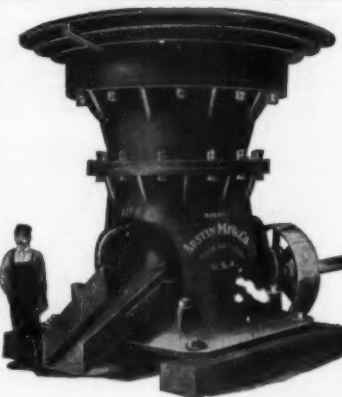
At the bottom of the cellar is a drain by means of which the impure oil can be removed insuring absolutely perfect lubrication because every part of the bearings operates continuously in a bath of pure oil.

One never has to expose the bearings of the "Austin" to dust when in operation. Fill the oil cellar to the required height and the machine must oil itself since no oil can escape from the oil cellar and therefore maintains a constant level.

Sizes for all requirements.

We are the world's largest builders of rock and earth handling machinery.

Catalogues of all departments on request.



**Austin Manufacturing Co. Chicago, U. S. A.**  
New York Office, Park Row Building

**Does Quality Appeal to You?**  
**Does Prompt Service Appeal to You?**  
**Does Reliability Appeal to You?**

Then Buy

**Your Stucco and  
Wall Plasters of  
The  
American Gypsum Co.,**

Manufacturers of

**High Grade Stucco. "Anchor" Cement Plaster.  
"Anchor" Wood Fibre Plaster.  
Superfine Calcined Plaster.**

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## STURTEVANT GRINDING MILLS

### SIX KINDS

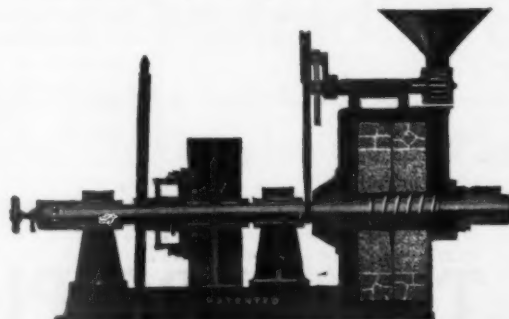
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Hard, Soft or Medium Rock.  
Produce a finished product  
without screens.

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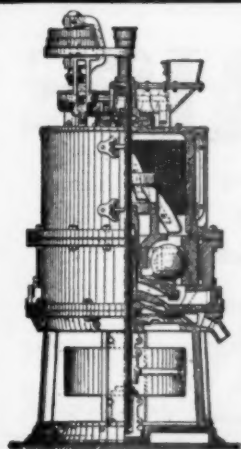


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105 CLAYTON STREET.

**BOSTON, MASS.**





## Fuller-Lehigh Pulverizer Mill

### The Best Pulverizing Mill Manufactured

Exhaustive tests in all departments, in competition with the most approved grinding machines in use, have demonstrated the superiority of our machine

#### OUR CLAIMS:

**Greater Output**

**Better Fineness**

**Fewer Repairs**

**Dustless**

*Few extracts from letters received from users*

"With the four we are now ordering we will have in use 16 Fuller Mills in all and I think you can hope to get orders from us within the very near future for quite as many more."

"We have to say for your Fuller Mill that it is unqualifiedly the best grinding device we have ever tried on our lime rock and eminently satisfactory to us."

"We are pulverizing with one Ball Mill and four Fuller Mills sufficient raw material to produce nearly 1200 barrels of clinkers per day, which record I believe can not be approached by any other mill on the market."

*If interested, write us for further information*

**LEHIGH CAR, WHEEL & AXLE WORKS, CATASAUQUA, PA. U. S. A.**



## ROTARY DRYERS

WE MAKE THE LARGEST VARIETY IN THE WORLD. MORE THAN 200 NOW IN USE NOW USED IN THE GOV. COAL TESTING PLANT. GOLD MEDAL AT ST. LOUIS. THE C.O. BARTLETT & SNOW CO. CLEVELAND OHIO U.S.A.



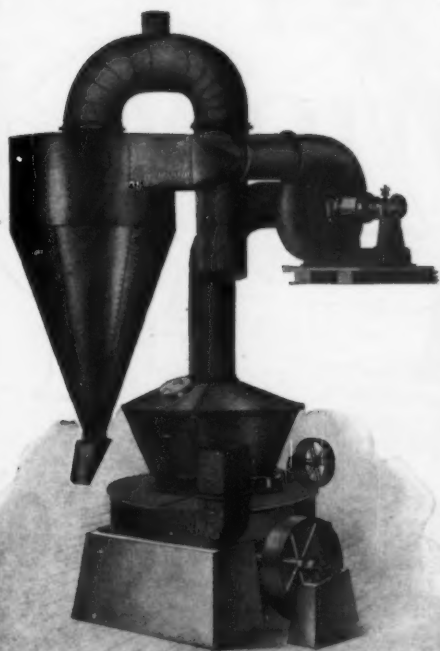
## A Pacific Coast

customer writes as follows:

"We are greatly pleased with your work on the gears you have made for us and shall take pleasure in sending you our order for the larger gears when we are ready for them."

We make prompt shipments  
"If in a hurry, wire us."

**R. D. Nuttall Company,**  
Pittsburg, Pa.



Our best customers have frequently been the firms who did not know (before we showed them) that we could help them.

If you grind to powder any material in your factory, we are ready to "show you" what

## THE RAYMOND SYSTEM OF AIR SEPARATION

has accomplished for more than 200 firms. As a first step you will certainly find it interesting and profitable to read our booklet

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This book will give you an idea of what we have been able to do for others, and what we may be able to do for you. We will gladly send you a copy free if you will ask for it.

**RAYMOND BROTHERS**

Impact Pulverizer Co.

141 LAFLIN STREET " " CHICAGO



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RAYMOND BROTHERS  
IMPACT PULVERIZER CO.  
141 Laflin St.,  
Chicago

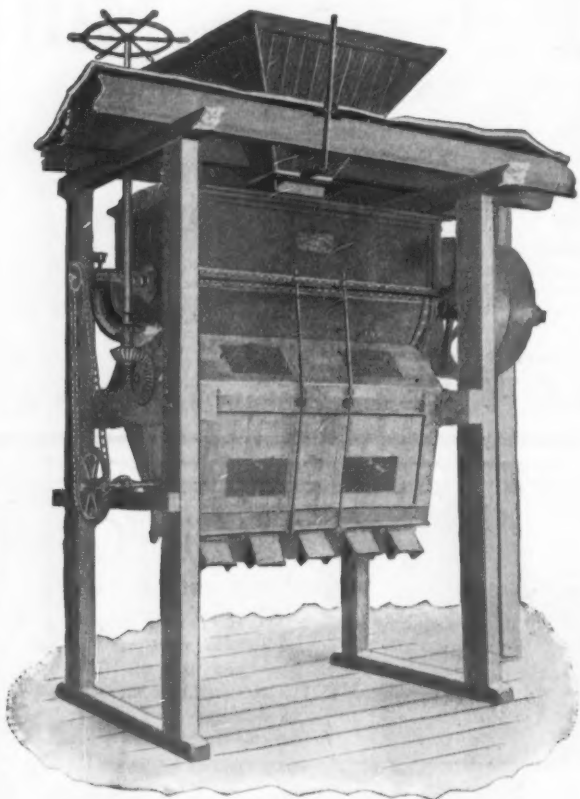
Please send your Look

"MAKING AIR MAKE MONEY"

Name \_\_\_\_\_

Firm \_\_\_\_\_

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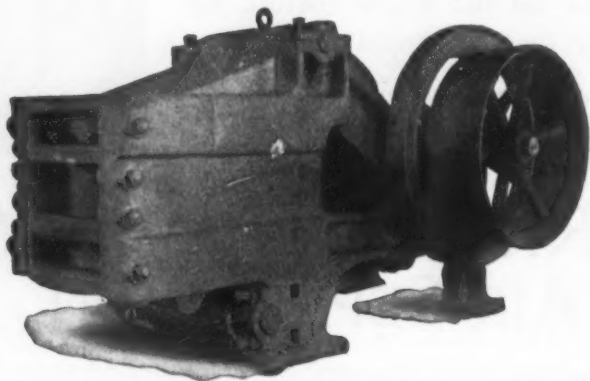
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NOISELESS,  
DURABLE and EFFICIENT.

For Mixing Hair Fibre, Wood Fibre and  
Retarder with Dry Plastering  
Materials.

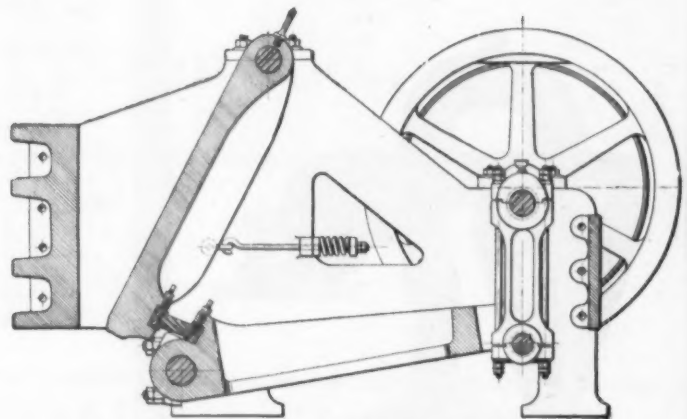
## Calcining Kettles

Jaw and Rotary Crushers for Gypsum, Reels,  
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mission for applying power.



EHRSAM NO. 4 JAW CRUSHER.

This machine will handle large chunks and reduce from 30 to 40 tons  
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NO. 4 JAW CRUSHER, SHOWING SECTIONAL VIEW OF NIPPER.  
The jaw opening at inlet is 18x28 inches.

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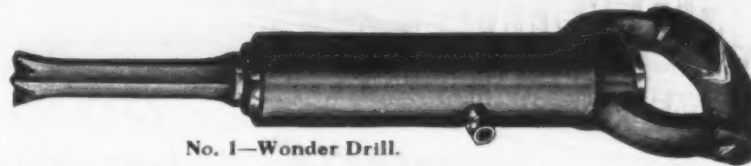
BUILDERS OF

### COMPLETE EQUIPMENTS FOR PLASTER MILLS

Enterprise, Kansas

DON'T TAKE OUR WORD FOR IT BUT THOROLY TRY A

# WONDER ROCK DRILLING OUTFIT



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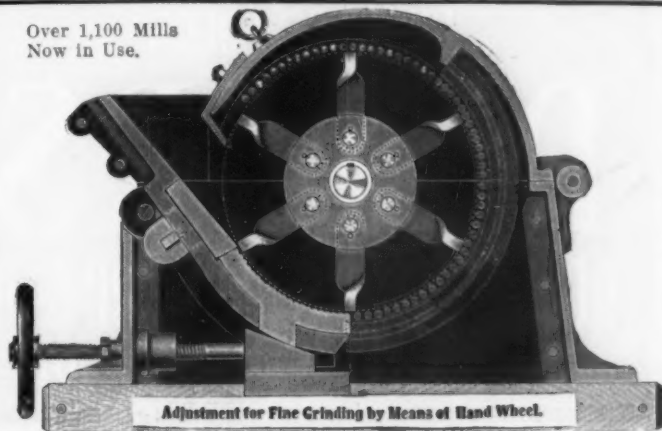
AND SEE IF YOU ARE NOT HIGHLY PLEASED AS HUNDREDS OF OTHERS ARE.

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**Hardsocg Wonder Drill Co.**

**Ottumwa, Iowa, U. S. A.**

Over 1,100 Mills  
Now in Use.



Adjustment for Fine Grinding by Means of Hand Wheel.

## RAW MATERIAL Grinders

UNIVERSAL for Tube Mill Feed, 800 bbls. per day 20 mesh.

VULCANITE for  $\frac{1}{2}$  in.,  $\frac{3}{4}$  in. and  $1\frac{1}{2}$  in. work.

We also grind Lime, Gypsum, Coal, Etc.

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Equipped with clam-shell loading bucket offers the greatest capacity as well as economy for handling sand and gravel in the pit. Crushed stone and screenings loaded and rehandled at minimum cost.

Advance Your Profits by Increasing the Output.

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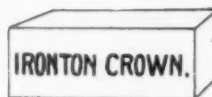


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## LIME KILN LININGS.

GROUND CLAY  
FOR  
WALL PLASTER  
AND  
BOILER SETTINGS



DIRECT HEAT

# DRYERS

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BANK SAND  
GLASS SAND  
ROCK, CLAY  
COAL, ETC.

All Mineral, Animal and Vegetable Matter.

We have equipped the largest plants in existence and our dryers are operating in all parts of the world. Write for list of installations and catalogue S. C.

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RUGGLES - COLES

# DRYERS

RUGGLES COLES ENGINEERING CO.  
NEW YORK CHICAGO

## Cummer Dryers

See Other Ad.

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After twenty years "CLINTON" colors still stand at the head. Get the genuine, with the "Little Yellow Side-Label."  
CORRESPONDENCE SOLICITED.

CLINTON METALLIC PAINT CO., CLINTON, N. Y.

**J. K. WILLIAMS & CO.**  
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The Largest Manufacturers in the U. S.

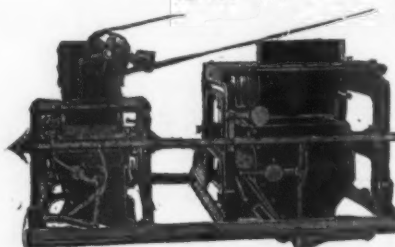
**BRICK AND MORTAR  
COLORING**  
OF ALL SHADES

CORRESPONDENCE SOLICITED. SAMPLES AND ESTIMATES  
CHEERFULLY FURNISHED ON APPLICATION.

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Designers and Builders of the  
SHOOP IMPROVED PATENT LIME KILNS.  
Designing and installing a Specialty.

YOU may make a mistake in your mixtures, but the  
**Richardson Automatic Scale**  
CAN NOT



The Richardson weighs accurately, proportions  
of Sand, Lime, Brick, Color and any other  
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**RICHARDSON SCALE COMPANY,**  
18-20 Park Row, NEW YORK  
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**MILWAUKEE BAG CO.**

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WRITE FOR PRICES & SAMPLES.

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ESTABLISHED IN LOUISVILLE, KY., 1902.

DEVOTED TO CONCRETE AND MANUFACTURED BUILDING MATERIALS.

Volume VII.

CHICAGO, SEPTEMBER 22, 1907.

Number 3.

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Seventh Floor Ellsworth Bldg., 355 Dearborn St., Chicago, Ill., U. S. A.

Telephone Harrison 4960.

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### BRANCH OFFICES:

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These are the busy, busy days for the dealers in builders' supplies. Their letters are mostly telegrams now. Have you noticed it?

The growing popularity of hard wall plaster is best evidenced by the rapid multiplication of new mills, and every one of them loaded down with business.

Cement is moving faster at this time than any other period of the year. If a car shortage don't overtake us there are still nearly two months for activity in the country generally, and the South is just getting busy. They are learning to use cement in quantities.

Crusher operations are constantly increasing in size, and larger crusher units are constantly in demand. There is no limit to the volume of business in any locality. Road building has only commenced, and concrete requirements seem to multiply monthly. If transportation were cheaper—but wait till Congress gets busy with the recommendations of the Memphis Waterways Convention.

Wooden lath is offered at yet higher prices all the time, while the quality grows steadily worse. Lately the wooden lath sold at big figures is nothing less than sawmill refuse, totally unfit to be used in modern high-class construction. The ultimate cheapness of expanded metal with its well known qualifications has already taken the field and is invariably found upon the specifications of the best builders.

Almost invariably a lime producer is a solid business man in the community where he operates, and yet the business is by no means the profit-getter it should be. Lime is an indispensable factor in the march of civilization and the man who produces it should get his'n. The promotion of more uses for lime in new directions is the problem that ought to interest everybody in the business. We will gladly give publicity to all suggestions in this direction.

Read ROCK PRODUCTS from cover to cover. Every line between our covers is designed to assist the busy man. It is classified so you can pick out what is most important to yourself if that's all the time you have got, but you can see the reflection of a busy world pretty fully covered if you will take it home with you for Sunday reading, and there's a suggestion on every page that can be found nowhere else:

There was a time when a man could successfully conduct a manufacturing establishment without classified information with regard to his special line of operations. That was before the trade paper came into existence. It is possible to-day for a man to make money without really knowing how it happened. But all of those who achieve commercial success in these days accomplish that desired result by the route of definite purpose, based upon accurate reliable information and persistent effort directed toward one end. The reading of a standard trade paper from cover to cover with regularity is as much a part of the program of modern success as to have a specific place for doing business and a definite method of operation. Publicity as developed in the field of trade journalism obtains for the business man that volume of orders which comes into the office voluntarily, and would otherwise have been overlooked in the rush of securing the business already within the horizon of his daily activities. With a properly worded advertisement the modern operator reaches beyond the immediate circle of his own vision, and increases the scope of his influence. If you have never given this attention, let us tell you the rest of the story. It is interesting as well as suggestive.

It is gratifying to note that the cement building block industry is getting into stronger hands, and that it is now recognized as a standard building material in every locality where blocks are manufactured intelligently by people of sufficient successful business experience to secure a living profit upon the sale of a very high class building material. The builders of machinery that is recognized by practical and successful men as being dependable for constant factory practice realize that the new industry has settled down to a calculable basis, and that it will steadily grow by reason of its own intrinsic merits into one of the biggest things. They are content to lay a firm foundation for future profit and growth by carefully coaching every purchaser to make a success of the business, and even go so far as to withhold the sale of machinery to that class of people who are certain to make poor material, to their own undoing as well as to the lasting discredit of the business. It is to be regretted that some misguided or at least shortsighted machine builders still insist upon the old policy of "catch the sucker, get his money and let him go bump." Every one of those bumps is a boomerang to the industry, and there has already been more than enough of that policy. Not every man who can borrow a few hundred dollars can make a big success of the cement block business. In fact it takes the kind of a man who can succeed at any business he undertakes. Those who think anybody can do it easily, had better guess again.



## Editorial Chat

### Our International Waterways.

What is perhaps the most important business conference that has gone upon record or will transpire during the present generation is known as the Deep Waterways Convention, to be held at Memphis, Tenn., on October 4 and 5.

It will be popular in character, with something like 3,000 delegates, representing every branch of commercial enterprise and dedicated to the cause of formulating a definite plan for submission to the next Congress with regard to the improvement and maintenance of the national internal waterways of the United States. The Lakes-to-the-Gulf Deep Waterway Association of Chicago has undertaken to connect Lake Michigan with the Illinois river by deepening and widening the connecting link, now known as the Chicago drainage canal, and so reaching the Mississippi with lake navigation. Similar associations have been formed at St. Louis, Memphis, Cincinnati and, in fact, every important river port located upon the Mississippi or any of its navigable tributaries. The prosperity and future growth of twenty of the more populous states almost depend upon prompt and efficient action at the convention in October and in Congress at its next session. President Roosevelt and the governors of twenty states will be in attendance at the convention, as will also the Inland Waterways Commission of the national government.

The work of this convention will have an important bearing upon transportation developments of the near future and transportation is the one problem that reaches like direct taxation every commodity and every individual of the nation. Even the price of bread is fixed by the cost of transportation. A cheaper and a better way is to be provided—a way much closer to the cost of cheap service—to displace heavily overcapitalized and specially privileged corporations operating railroads in the most costly and ruthless manner.

The far-reaching influence of the policies formed and the plans to be adopted at Memphis certainly mean a cheaper and safer means of delivery for every product of the quarry and mine to all the important markets of this broad land. The cheapest of freight transportation is that carried on by water. Our rivers are public property. The government collects neither toll nor tax for the use of them. Now we want the government to improve these rivers in order that we may transport all of our products in logical directions free from the inconveniences, delays and excessive costs imposed by a railroad system which cannot keep pace with the rapidly increasing requirements of commerce. This is indicated each year by car shortages and other evidences of lack of appreciation of the needs of the country.

This is a measure of the first importance to the cement manufacturers and dealers and heavy engineering contractors in particular, as well as the machinery interests who supply tools and equipment of every kind for economizing this class of construction. Large appropriations will be devoted to building hundreds of locks, dams, retaining walls, water storage basins and flood relief receptacles. The whole undertaking will amount to more than four or five Panama canals and will require many years to achieve final completion. Much the larger part of all this immense undertaking will be built of concrete. Dredging, excavating and manipulating of tremendous quantities of aggregate materials must be provided for. Crusher and screening operations upon a scale yet unknown will be demanded. Sand washing and separating stations will have to be provided, and this colossal undertaking of the greatest people on earth for tackling big things must and will be started at once.

It is up to the leading spirits of the material supply and machinery interests to see to it that they are

efficiently represented at the Memphis convention and assist and support the big effort Rock Products is making right on the job for the special benefit of these very interests who constitute our business family.

The relative maximum efficiency of railroad transportation has, in the opinion of careful students of the situation, been reached, and railroad engineers now claim that more than \$5,000,000,000 in cash would be required to give the railroads the facilities needed to handle in an efficient manner the nation's increasing commerce. Three hundred million dollars spent on waterway improvement in the Mississippi valley would permanently relieve the congestion in some forty of the richest and most prosperous states in the union and at the same time open new channels of trade to an extent not dreamed of.

The total cost of the waterway improvements, according to the best informed authorities, will be only 6 per cent of the amount required to make the now urgently needed railroad improvements.

We are going to ask the government for the 6 per cent, with the hope of minimizing the demands the railroads are making and will have to make, in case the \$5,000,000,000 are expended by them, from the public in the shape of transportation profits for interest and dividend purposes.

In either case the public pays the piper. If we improve our waterways and the government issues a loan of \$300,000,000 for that purpose, the public, through the Washington treasury, will pay, say, 3 per cent interest annually, amounting to \$9,000,000. Should we not relieve the situation by waterway improvement and the railroads come to the rescue by spending the \$5,000,000,000, the people will pay into the pockets of the bondholders annual interest of, say, 5 per cent, amounting to \$250,000,000, or a yearly sum almost equal to the total amount needed for waterway improvement, besides other huge amounts required for sinking funds, maintenance, speculation, etc.

Broadly speaking, this is the big issue involved. We are going to Memphis in October for the purpose of talking these matters over and mapping out a plan of action to put the \$300,000,000 project into practical shape.

This great movement is already a familiar subject to the readers of Rock Products, for this journal took the initiative years ago and has never missed an opportunity to give suggestions and assistance upon every possible occasion. It is now well nigh assured that definite plans for successful action will be formulated at Memphis, and what we ask of every intelligent reader is for him to do his part by explaining the directly personal nature of the benefits to be derived from this important national improvement, so that popular sentiment may be molded in such a way that all the Congressmen from the forty States most particularly benefited will go to the next Congress, if not actually instructed, at least fully informed as to the attitude and wishes of their constituencies in the matter of internal waterways improvement legislation.

The opinion of the people of this country makes the government, and the only direct tax which is not controlled by the people is that imposed arbitrarily by the transportation corporations operating through the privileges of railroad charters to tax the property of the people according to the desires of the men who control transportation. The real question to be considered at Memphis is: Shall the people free themselves from this arbitrary transportation tax and provide a better method free to all within the control of their own government, and one that will always act as a powerful regulator against transportation injustice in the great future of a larger commercial era?

The Publicity Department of the Atlas Portland Cement Company has prepared a volume which they have named "Concrete Country Residences." This book has been compiled at such enormous expense that it can only be distributed by sale; consequently the nominal price of one dollar per copy is charged. The book contains reproduced photographs of residences constructed of concrete, and ranging from very modest expenditure to palaces of the most highly decorative design. With most of the pictures the floor plans in detail are given, which makes the book complete for the purpose for which it was designed, and extremely valuable as a guide and model to the designers of future concrete residences. No such powerful argument has issued from the press bearing upon the scope and versatility of the application of cement for the construction of ideal fire-proof homes. The work is not confined to any one idea or branch of concrete construction, but monolithic buildings, structures reinforced with iron, cement stucco spread upon metal lath, cement mortar blocks and blocks of solid concrete are all exploited without argument other than the picture of the completed work, the structural details and the design



"LOOSENING UP" IN NEW YORK.

upon which it was built. The amount of money spent by the Atlas Portland Cement Company in producing this extremely creditable and highly valuable contribution to the cement literature of the country has been backed up by a well conceived, ideal and purposeful campaign in order to collect such a diversified quantity of illustrative evidence. For the first time a fully illustrated and intelligent exhibit of the prize-winning designs of the recent concrete competition, conducted by the American Portland Cement Manufacturers, has appeared in print. This book deserves a very wide distribution, and will certainly be highly appreciated by the most intelligent element of the concrete contracting interests of America.

W. H. Ford, Louisville, Ky., the manager of sales for the Kosmos Portland Cement Company, has landed an order for 35,000 barrels in one chunk at Nashville. The same will be used in building concrete piers and approaches for the two big bridges over the Cumberland River near Nashville. He is somewhere near being the fastest mover in the South and wherever there is something doing he is sure to be found somewhere thereabouts. His mill doubled its capacity about the beginning of the present season, they have never lost a day and still every barrel of cement has been moved out, which is good evidence that the redoubtable Ford has been "going some."

President Richard L. Humphrey of the National Association of Cement Users is sending out a circular letter from his office in the Harrison Building, Philadelphia, urging the membership of the association to individually put forth their efforts to secure the largest possible attendance at the next annual convention, to be held in Buffalo, N. Y., in January. The membership of this association is very large and represents the whole country in all of the lines of concrete construction, and yet if the membership could be increased fourfold by the time of the next convention it would be no more than the efforts of the officers and promoters of this most important educational factor of the industry richly deserve. Since the organization of this association, almost four years ago, a wonderful impetus has been given to the intelligent use of cement for very many purposes. The leading spirits of the thriving concrete industries have not withheld their personal support of the cement users of this organization and probably the best efforts of the best prepared men in the country have been promulgated at the annual conventions of this association, practically free of cost to all who choose to profit from the labors of such an organization so equipped. There are many important features and developments for the future expansion of the business that will come up at the time of the Buffalo convention. Already the indefatigable president, in conjunction with his able assistants and associates, are preparing a program such as no man who makes his living by the use of cement can afford to be without the practical education offered at first hand. We hope that every reader of Rock Products, whether he is an engineer, architect, contractor or manufacturer of cement building material, will make his preparations early enough in advance so that there will be a grand rally such as has never been on record. It is worth the price. And you, gentle reader, are especially urged to swell the crowd by one unit, even if you can't bring all your neighbors and competitors along with you.



J. C. Van Doorn of the Universal Portland Cement Company, who has long represented that concern at St. Louis, has taken up similar duties at Minneapolis, where he has the entire Northwest to take care of in the way of supplying Universal Portland cement. Edward Quibben, who has been Mr. Van Doorn's understudy at the St. Louis office, becomes the manager of that branch. Both of these gentlemen are to be congratulated upon the occasion of this well deserved promotion. They are popular with the trade and are famous fighters for their customers' interests in spite of the shortness of the supply of cement upon occasions without number.

While at Kansas City the other day a representative of Rock Products called at the office of the Marblehead Lime Company and had a pleasant chat with W. J. Stewart, who has charge of that company's operations at the Kansas City market. He was enthusiastic over the good features of hydrated lime, and he said that the product from the company's new plant was gradually gaining ground both with the dealers and users in Western territories, although they were a little chary about taking up the new material. However, it is to be noted that a customer once secured returns again for more. The office of the company is located in the Long Building, where so many building material people are congregated. This building is fast becoming the Mecca of the contractors, architects and engineers who are on the hunt for quick deliveries of building materials.

In this same building the Lumbermen's Portland Cement Company have established an office, which is in charge of Secretary B. F. Cobb, whom thousands of lumbermen remember so well as the man who originated, during his long connection with papers devoted to the lumber trade, many fables and unique stories that have now gone down to history as facts. He probably knows more lumber retailers than any other man. He loves the whole bunch and has a droll story about every one of them. If you don't believe it, ask him. He knows something about timber, too, and now he is organizing and building a big cement plant in Kansas, where they are getting thicker than huckleberries in August, but there seems to be a place for every barrel of cement that can be made.

Bert M. Swet, the genial salesman of the Lehigh Portland Cement Company, has been sick enough to be confined to his room for the last two weeks.

Charles C. Kritzer, who is known to fame as the apostle of hydrated lime, has painted upon his escutcheon the legend, "My mission is to make two blades of grass grow where there was only one before." Sometimes he has to don overalls and wrestle with a monkey wrench, but all dauntless of such trifles he is the same Kritzer and is still planting grass seed. Recently he made an extended trip to the "mysterious" East, where the waves of old Atlantic lave the shore. In fact he is violently suspected of having taken a vacation.

G. E. Adams of the Cleveland-Akron Bag Company will spend the next six months at Manila, where his company secure large quantities of the raw material which they make into paper bags. If he don't turn into a Spaniard before his return he may give our readers an account of his travels in the far-off islands.

J. W. Farleigh, for many years connected with the Western Cement Company at Louisville, Ky., has recently, with a co-worker, started in at Chattanooga, Tenn., as consulting engineer, and is devoting special attention to concrete lines.

G. E. Carlyle of Portsmouth, Ohio, announces that he will go into the business of manufacturing firebrick at Olive Hill, Ky.

W. O. Taylor, general manager of the Casparis Stone Company, Columbus, Ohio, has been on a visit to all the plants of the company located in Ohio, Indiana, Illinois, Missouri and South Carolina. In speaking of his trip Mr. Taylor said that at all the plants the scarcity of labor has been the most serious obstacle. In all his travels he said that he had neither seen nor heard anything to indicate that there was going to be a decline in business conditions, but, on the contrary, the demand for crushed stone is steadily increasing for every known purpose.

One of the visitors to the States is George H. Angus of Honolulu, H. I. Mr. Angus has been looking over the lime plants in various sections of the

country with a view to operating a lime plant in our dependency and our advertisers will, no doubt, get busy now and land his order.

A. H. Lauman of Pittsburg, Gibsonburg and any other place where mortar or lime should happen to be the subject of conversation, spent a few hours in Chicago recently. He is building a mammoth plant at Gibsonburg, Ohio, for the manufacture of lime. A very large per cent of his output will be in the hydrated form.

It was a pleasure not long since to meet Lowell M. Palmer, Jr., president of the Palmer Lime and Cement Company in New York. Mr. Palmer had just taken an auto trip through the Lehigh Valley and incidentally commented upon the fact that finishing lime was in great demand in the East, his company having more orders than they could take care of, notwithstanding their great facilities for producing Cheshire lime and the fact that their new modernized plant is equipped for extremely large capacity. They have recently finished a new plant at Yorktown Heights and are very much encouraged over the volume of business and the fact that speculation in building has been practically eliminated on Long Island this year.

W. N. Beach, president of the Pennsylvania Cement Company, New York, was preparing to take his vacation in Maine when we saw him last, with the idea of chasing moose and other big game.

E. S. Larned, the American Cement Company's representative at Boston who enjoyed looking over the heads of the Board Walk throng at Atlantic City, took the trouble to introduce Rock Products to one of his good customers, M. B. Damon of the Fitchburg Hardware Company, while in Boston a few days ago. Mr. Damon said that his city was having its share of prosperity, it being that stage of growth and development of which many New England cities could be proud. Mr. Larned came to Atlantic City to read a paper on cement blocks and also to attend a meeting of the executive committee of the Cement Users' Association.

"My number is 991. If you find the party connected with this number, deliver to the secretary of the Owl Cement Club, F. L. Cox, Marquette building, Chicago." You frequently see a gold owl with a gunmetal background on a watch-fob. That's it. By the time the Owl Club increases to the 99,000 mark, Ed Cox will find it necessary to give up his special job of selling owl cement and look after the "lost, strayed or stolen." The membership is not confined to men with bald heads or gray hair, but if they have any connection with building material business their applications will receive the best attention.

Fred E. Paulson, western sales manager of the Lehigh Portland Cement Company, with headquarters at Indianapolis, was in Chicago the other day looking for business. He got it and reported that business was very good with their company and that the order books occupied more pages than at any time this year.

Don Kimball, who was for a number of years connected with the sales department of the Dolese & Shepard Company of Chicago, has recently joined the sales department of the Colorado Cement and Plaster Company, Charles Building, Denver, Colo. This company are largely interested in and are sales agents for the Roaring Fork Plaster Company of Ruedi, Colo., and by the way, have adopted the "King Lad" bulldog brand for gypsum products. The Colorado people are also interested in the manufacture and sale of cement and are large distributors of building materials.

An Italian chemist is exciting considerable interest in New York city by the announcement that he can with cement turn animals into stone by a secret process which he accidentally discovered while in South America. Among his specimens are hogs, dogs, cats, lizards and beetles. All are as hard as stone, odorless and retain their natural colors. There is many a jest about the street and among the cement men. Some say he must load the animals with cement, while others claim that if so he would use reinforcing bars. And so the story goes on.

## CONTRACTING OPPORTUNITIES.

EXCAVATION.—Sealed bids will be received until October 12 for excavation, riprap and paving at Colbert Shoals Canal, near Riverton, Ala. For information, address



IMMORTALIZING FIDO.

William W. Harts, Major of Engineers, United States Engineering Office, Chattanooga, Tenn.

DREDGING.—Sealed bids will be received until October 10 for dredging and rock removal in Withlacoochee River entrance, Florida. For information, address Lansing H. Beach, Major of Engineers, United States Engineering Office, Jacksonville, Fla.

EXCAVATION.—Sealed bids will be received until October 7 for rock and earth excavation, Section 2, Plan B, Detroit River. For information, address Charles E. L. B. Davis, Colonel of Engineers, United States Engineer Office, Jones building, Detroit, Mich.

DREDGING.—Sealed bids will be received for dredging in Mystic River, Massachusetts, until September 30. Apply for information to Edward Burr, Major of Engineers, United States Engineer Office, Boston, Mass.

FILTER.—Sealed bids will be received until October 23 for finishing and erecting complete washing pressure filter plant for the city of Atlanta, Ga. For information, address Park Woodward, General Manager, Board of Water Commission, Atlanta, Ga.

FILTERS.—Sealed bids will be received until September 30 for furnishing and erecting a covered sand filter and a covered filtered water reservoir to hold 10,000,000 gallons. For specifications, address Theodore A. Lelsen, Chief Engineer, Water Department, S. E. C. Sixth and King streets, Wilmington, Del.

SEWERS.—Sealed bids will be received until October 1 for constructing approximately fourteen miles of six-inch vitrified pipe sewer laterals. For specifications, address L. A. Washington, City Engineer, Paducah, Ky.

PAVING.—Sealed bids will be received until October 1 for macadamizing, draining and building curbing in certain streets in the city of Billings, Mont. For specifications, address J. D. Matheson, City Clerk, Billings, Mont.

CEMENT, CRUSHED STONE, SAND.—Sealed bids will be received until October 15 for furnishing and delivering 14,000 barrels of Portland cement, 16,500 tons of crushed stone and 7,000 tons of sand. Address C. W. Otwell, Captain of Engineers, United States Engineer Office, Honolulu, T. H.

DREDGING AND JETTY WORK.—Sealed bids will be received until October 12 for dredging and constructing jetties in James River, Virginia. For information, apply to S. H. Yonge, Assistant Engineer, 18 North Ninth street, Richmond, Va.

WATER SYSTEM.—Sealed bids will be received until October 10 for constructing a 159,999-gallon tank and remodeling water and sewer systems. Apply for information to Captain J. L. Knowlton, Constructing Quartermaster, Fort Dupont, Delaware City, Del.

PUMP AND DREDGE.—Sealed bids will be received until September 30 for constructing steel hull and 16-inch pump dredge for Savannah River. For information, address J. C. Sanford, Major of Engineers, 815 Witherspoon building, Philadelphia, Pa.

DREDGING.—Sealed bids will be received until October 9 for dredging at Forrester's Point, St. John River, Florida. For information, address Lansing H. Beach, Major of Engineers, Jacksonville, Fla.

JETTY WORK.—Sealed bids will be received until October 3 for the construction of stone jetties at Cold Spring Inlet, New Jersey. About 285,000 tons of stone will be required. Address C. A. F. Flagler, Major of Engineers, United States Engineer Office, Wilmington, Del.

LOCKS AND DAMS.—Sealed bids will be received until October 5 for constructing locks and dams Nos. 2 and 3 in Tombigbee River, Alabama. Address H. Hervey, Major of Engineers, United States Engineer Office, Mobile, Ala.

DREDGE.—Sealed bids will be received until September 30 for constructing dredge. Address either W. H. McAlpine, Assistant Engineer, Frankfort, Ky., or J. G. Warren, Major of Engineers, United States Engineer Office, 415 Custom House, Cincinnati, Ohio.

DREDGING.—Sealed bids will be received until October 8 for the dredging Section 1, Plan B, Detroit River. For information, address Charles E. L. B. Davis, Colonel of Engineers, United States Engineer Office, Detroit, Mich.

LOCK AND DAM.—Sealed bids will be received until October 5 for constructing lock and dam No. 8 in Ouachita River at Franklin Shoals, Arkansas. Apply for information to G. M. Hoffman, Captain of Engineers, United States Engineer Office, Vicksburg, Miss.

DREDGING AND EXCAVATING.—Sealed bids will be received until September 30 for dredging and rock removal in Saugerties Harbor, New York. Apply for information to John G. D. Knight, Colonel of Engineers, United States Engineer Office, Room F-7 Army building, New York, N. Y.

# Quarries.

## RAILWAY CONSTRUCTION.

For six months or more the hue and cry has come from financial centers that railway construction is very much reduced owing to the fact that the financial end of the railroads could not secure the money to work on the improvements. Notwithstanding this fact, in conversation with crushers of ballast and rock, we notice that these quarries are all in full swing and business is good with them, thus giving the lie to the theory that the railroads are not spending their money. Of course it is true that some of these roads do not make requisitions for as many new bridges as they did in years like 1905 and 1906, but there is no let-up in the orders for crushers nor are the old crushing plants suspending operations for lack of orders. They are still shipping from ten to 150 cars every day in the week.

Some idea of the importance of the crushed stone industry can be gathered by just looking around at the various interurban street car lines and local railroad lines being added to, and the fact that railways when not worrying about rolling stock are on the lookout for the betterment of the condition of their roadbeds. A few months ago the New York Central Railroad published the fact that they were unable to pay a six per cent dividend owing to the increased expenditures, and it is only necessary to look from the car windows of any fast train to see the superintendents of the various sections with section crews thicker than ever and the construction trains more numerous than for many years.

You might also look into the big hole where the Pennsylvania Railroad is building its depot in New York City. You will hear the chug of the drill and the whirr of the crusher, and a glance also takes in the concrete retaining walls and forms for concrete piers, evidencing the greater use of crushed stone and the fact that the money has not given out yet.

## CRUSHERS AT ST. LOUIS.

### Hoffman & Hogan Construction Company.

Reference has already been made in these columns to the numerous limestone quarries which are to be found in various districts of the city of St. Louis, often surrounded by dwellings and business places. In case, however, of the quarry of the Hoffman & Hogan Construction Company the Rock Products man found this to be located at a bluff on the Mississippi river in South St. Louis, known as the "Palisades." The quarry is 70 feet in depth and between it and the river are the tracks of the Iron Mountain Division of the Missouri Pacific Railroad, which renders the delivery of sand convenient, since it can be hoisted to the bank in the same way as the stone from the quarry. The company has a crusher, equipped with the usual elevating machinery.

At the present time the company is engaged in the construction of the largest concrete sewer in the world at 6300 North Broadway, known as the Harlem Creek public sewer. Its length is 4,800 feet; clear span 29 feet lower end, 25 feet upper end; height 19 feet and 18 feet. It is designed for 15 feet fill. Red Ring brand Portland cement is being used exclusively on this job.

The Perkinson Bros.' Construction Company have at Grand and Florissant Avenues a limestone quarry about 75 feet in depth. This quarry, as well as one at Broadway and Bissell Streets and another at Blair Avenue and Penrose Street, is equipped with steam power crushers and derricks. The company are very busy in getting out building stone for foundations and macadam for street work.

The Sinclair Quarry and Construction Company, G. H. Slaughter president, has an office at 620 Wainwright Building. The company is the proprietor of the Vigus quarries, which are situated on the Rock Island Railroad about twelve miles west of St. Louis, from which shipments of stone for building foundations and crushed stone for concrete work are made.

## AT EAST ST. LOUIS.

Ralph E. McLean, manager of the East St. Louis Stone Company, reports their quarry at Falling Springs is doing a good business in getting out paving, rip-rap, macadam and building stone. The quarry is located about eight miles from the city near the railroad. It is a surface quarry, so-called, and easily worked with a steam shovel, after the blasting is done with regard to all material but cut-stone, as the hill abuts the railroad track.

## Big Concern Changes Hands.

WASHINGTON, D. C., Sept. 10.—Joseph H. Bradley and others have recently purchased from the Warder Estate their interest in the Potomac Stone Quarries, the consideration being \$125,000. Charles G. Smith has been operating these quarries under lease, and he sold his equipment for the operation of same to the new purchasers. Mr. Bradley is also president of the Columbia Sand Dredging Company and with his associates will form a new company. Mr. Smith will retain an interest in the company and occupy the position of secretary and treasurer. The gentlemen forming the new company are large factors in the handling of building materials, having control of immense sand and gravel banks, as well as handling thousands of yards of crushed stone and cement.

## Big Pike Road Contract.

BELLEVUE, O., Aug. 18.—One of the progressive and up-to-date crushed stone men in Ohio is C. R. Callaghan, secretary of the Bellevue Stone Company, who has just been awarded the contract for his company for 13,197 feet of pike road, 10 feet wide, in Concord township, Lake County. The work will require 4,888 cubic yards of crushed stone and will be completed November 20 of this year.



LIMESTONE BLUFFS ON THE MISSISSIPPI BETWEEN ALTON AND ST. LOUIS.

This piece of work will become historic in time, for it will be the first piece of piked road ever built in Lake County, and with the character of work done by this company will last practically for all time.

## Busy Wisconsin Concern.

The C. Smith Stone and Brick Company of Appleton, Wis., report that they have a sandstone quarry which they are unable to operate owing to other branches of the trade being so heavy. This they are trying to dispose of.

## Large Crusher Installed.

ALBION, N. Y., Sept. 15.—The Orleans County Quarry Company has purchased a \$25,000 stone crusher. They will crush 40,000 yards of stone for the electric railway now being built from Rochester to Lockport. A large steam shovel has been installed to move the stone to the crusher. The plant has a capacity of 750 cubic yards per day.

## Rush Orders East.

DOVER, N. J., Sept. 15.—The crushed stone business in this section bears all the earmarks of a spring opening. The California Lime Stone Company are receiving new orders daily for their product, the latest of which is one for 15,000 tons of crushed stone to be shipped to Elizabeth for street work in that city.

## Doing Big Business.

KINGSTON, N. Y., August 18.—One of the largest crushed stone plants, and practically the busiest, is that of the Cedar Cliff Stone Company of New York, which is capitalized at \$300,000 and employs about 150 men. The company has leased the property of the John Kerr Estate and is working all hands to produce crushed stone for ballast and concrete use.

## County Quarries Recommended.

Down in New Jersey there comes a wail on account of the present cost of crushed stone for roadmaking and the suggestion that the counties operate their own quarries, for the reason that roadmaking is more of a necessity today than ever, owing to the advent of the automobile, and the suggestion that perhaps if convict labor is employed the cost would be reduced by handling the material at first hands. After an investigation of the matter, however, even the former road commissioner discovered that it was not the case of the quarry operator getting more for his stone, but it was the fact that common labor of today was receiving the salary of the banker of thirty years ago, and notwithstanding the fact of the many improvements in the crushing of stone, each year the cost of putting the crushed stone on the road increases. Of course some of our commissioners, like stone men, have been known to use a short yard stick in order to take care of the rake-off which seems to have been the style in latter years, but it certainly would be short-sighted on the part of the crushed stone men to get the price too high. There is no class of men who like better to buy cheap and sell at high prices than the farmer, who is generally the cock-of-the-walk who lives on the country road and has to make the road or help pay for it, and you can always count on him complaining if he gets a short yard or too much dust.

The county cannot operate the quarry any cheaper or half as cheap as the crushed stone man, and he has been lax in only one thing, and that is securing legislation and influencing increased roadbuilding. In other words, he has neglected his sales department, and it is up to him right now, because there are more people advocating good roads than ever in the history of the country.

## Will Put in More Equipment.

PIQUA, OHIO, Sept. 10.—The Statler Stone Company have just completed an order for about 6,000 cubic yards of macadam stone for street improvements in this city. This concern expect to double the capacity of their plant during the coming winter, which improvements will be up-to-the-minute in character. They have just secured the order for 10,000 cubic yards of macadam stone for Montgomery County, Ohio, turnpikes. This order will be shipped over the Dayton and Troy electric railroad, which has recently spent some \$15,000 for track extension and equipment for handling this class of heavy traffic. This opens up a new outlet for crushed stone for ballast, macadam and concrete. Orders are plentiful for all sizes, including the screenings.

## Look to the West.

The prosperity of the Western farmer has led him to cast his eyes toward the resources in his neighborhood in order to discover how rich he really is, but the subject of this comment is brought out because of the fact that he is also looking to the improvement of the roads. The soft roads in the corn country of the West can be greatly improved for the good old winter time by the operation of limestone quarries, and an Iowa country paper in commenting upon the matter says: "Some of these fine days stone formations are going to serve another purpose than the picturesque. Already the old wooden culverts are giving way to the modern culverts of cement. The rock crusher is becoming a fixture and will be busy along our creeks, working up the limestone beds into crushed rock for macadam and concrete."

The fact that the big crushing plants in and near the principal cities had all they could do this year encourages new operators, and now, while in most sections you can secure crushed rock, yet there are plenty of opportunities in the Western States for the sale of crushers to produce this all important commodity.

A new stone crusher costing about \$25,000 has been bought by the Orleans County (N. Y.) Quarry Company at Albion, N. Y. The Brady Company near that village is to crush 40,000 yards of stone for the electric railway now being built from Lockport, N. Y., to Rochester.

The Jones & Laughlin Steel Company is a recent purchaser of additional heavy Allis-Chalmers electrical machines in the shape of two 1000 K. W. 6600 volt generators wound for 25 cycles, 3 phase, and designed to operate at 94 R. P. M. These units, together with a 600 K. W. direct current generator, 2400 volt, and operating at 110 R. P. M., will be installed in the new Aliquippa Works, situated in the Ohio river several miles outside of the city of Pittsburgh.

The Carico Stone Company, with headquarters at Rockford, Ill., was incorporated with a capital stock of \$40,000. C. W. Carico, Fred K. Carico and O. V. Sherman are the incorporators.



## A NEW PRINCIPLE IN SCREENING.

## A Separator which Screens Nearly Everything from Half-inch to 200 Mesh, and Lasts.

More than two thousand years B. C. the Egyptians made a screen of interwoven reeds, enclosed in a frame, filled the frame with material to be screened, and then began to shake. For four thousand years we have blindly followed their idea, and although we have improved on the screen itself, we have continued to shake—shake—shake. For years we have wasted energy and money in shaking our screen frames and their attendant mechanism to pieces, to say nothing of the wear and tear on the screen itself, and all this with very indifferent success as regards the screened product.

It was for W. J. Bell of the Newaygo Portland Cement Company, Newaygo, Mich., to suggest the alternative in this case. The frame to his separator is rigid; the screen frame is not shaken, but the screen cloth itself is vibrated like a piano wire. This seems to solve the vexed question of economical screening.

This separator, styled the "Newaygo Separator," is an inclined, vibrating screen, framed in steel and enclosed in steel. The screen cloth is automatically kept in strong, uniform tension, and is vibrated by small hammers constantly tapping its protected surface. This remarkably simple and ingenious device for producing vibrations secures astonishingly rapid and sharp movements, yet of small amplitude. These indestructible vibrations give material in process of screening the least possible projection, and offer innumerable opportunities to pass through the clean screen openings before tailings escape at the foot.

Owing to the rapid and continuous small, but highly effective screen-cleaning vibrations of the screen cloth, the material, if sufficiently dry, never clogs. These small cleansing shocks cannot become deadened because the screen automatically maintains its required tension.

An inclined vibrating screen must necessarily have a much larger capacity than others, because it cannot so easily clog, because all its surface works all the time, and it is no small advantage that coarser wire and meshes can be used to produce the same output than are possible in the old constructions. Large wires are clearly more durable than small ones. In an inclined vibrating screen coarse wire can be successfully used for very fine work, because inclining the screen surface diminishes the size of the openings, and the little, sharp vibrations keep the pores open.

Material in process of screening will not race down an inclined, vibrating wire surface, nor will it leap far, and thus skip many opportunities of escape; nor will it bounce on the wire with cutting force, but it partakes of a steady flow with millions of little screen-clearing shocks that open the pores and constantly invite the escape of the finest materials long before they have reached the foot of the screen.

The fineness of output can be controlled to a considerable extent by changing the inclination of the screening surface, this change being made by moving the adjustable supporting legs, which, as we know, has the same effect as diminishing the screen mesh. The opportunities for material to pass through the clean meshes of a vibrating screen are so infinitely more numerous than in the old "shaker," or round screens, that the tailings, even in rapid work, and with small meshes, must be much cleaner than usual. The screen, or screens (one or two screens of any mesh up to 100 may be used) can be readily withdrawn for replacement or cleaning.

The output that may be obtained from "Newaygo Separators" is from  $\frac{1}{2}$  inch up to 200 mesh, with capacities varying from 40,000 pounds per hour down to 1,000 pounds, according to the material and fineness of screen cloth.

Mr. Bell has seventeen of these inclined vibratory separators in constant use at the Newaygo Portland Cement Works, and believes that the problem of simple, economical screening has been solved.

The Sturtevant Mill Company of Boston, Mass., has underwritten this separator, and hereafter it will be sold exclusively by them.

## Lime.

## The National Lime Manufacturers' Association

Meets Semi-Annually.

Peter Martin, Huntington, Ind. .... President  
A. A. Stevens, Tyrone, Pa. .... First Vice President  
W. B. Carson, Riverton, Va. .... Second Vice President  
T. H. Fleischer, Sheboygan, Wis. .... Third Vice President  
C. W. S. Cobb, St. Louis, Mo. .... Treasurer  
E. H. Delebaugh, Chicago, Ill. .... Secretary

Official Organ, ROCK PRODUCTS.

## FINE EQUIPMENT.

## An Enterprising Wisconsin Lime Concern Takes the Lead in Up-To-Date Methods.

The general offices of the Standard Lime and Stone Company are located at Fond du Lac, Wis. The officers of this company are E. H. Lyons, president; F. J. Reuting, vice-president, and W. A. Titus, secretary and treasurer. Besides manufacturing lime and stone they also deal in cement, stucco and plastering, hair and other building materials.

They have three plants: one on each of the railroads entering Fond du Lac. The plant on the Wisconsin Central is located at Valders, where they have four kilns. The stone at this plant is burned by producer gas. The plant on the C., M. & St. P. is at Knowles, and the plant on the Chicago and Northwestern Railroad is near Oakfield. At the last named plant they have erected and now have in operation a hydrating plant, designed, erected and equipped by the Kritzer Company of Chicago. The plant, located about a mile from the station at Oakfield, was put in operation on a day when a ROCK

PRODUCTS representative arrived. Charles C. Kritzer was in charge of the plant, ably assisted by Michael O'Brien, who is superintendent of the quarry and plant, and Patrick Murphy, who is to have charge of the hydrating plant. The lime here is somewhat out of the ordinary, and Mr. Kritzer has worked out, as only an expert engineer can, some very difficult problems to secure a perfect hydration.

This quarry was opened, the crushing plant and the lime kilns put into operation a year ago last October. They have here probably the most economical means of moving stone employed by any quarry in the country. The stone is taken from a ledge the face of which is 125 feet high. Operations have been started about half way up, or level with the top of the lime kilns, as shown in the picture. When opening this quarry the greatest difficulty was experienced in stripping for the first platform, and all the stripping at first was done by hand, and the first stone was also carried down by the laborers until a space large enough was cleared to use a wagon.

They are now well into the face of this ledge and keep it very clean. Four teams haul the stone from the ledge to the crusher and lime kilns, and there is practically no stripping now, though at some places it is two feet. The blasting is all done by dynamite and Judson powder. Two Ingersoll-Rand drills are used. They have two kilns at this plant, each having a capacity of 175 barrels per day. The kilns are built of steel and are 55 feet high. They are located 200 feet from the ledge and a bridge has been built from the ledge to the top of the kiln, supported by a trestle work. The lime at this plant is burned exclusively by wood brought in on the railroad.

After the lime is drawn from the kilns it is allowed to cool in a shed 40 by 84 feet, which is also used as a storage and shipping room.

The hydrating plant adjoins the shed on the west. The lime is conveyed into the hydrating plant by wheelbarrows and dropped into the Sturtevant crusher, the opening of which is on the first floor. After passing through the crusher, the crushed lime is taken automatically by a conveyor of steel construction to the second floor of the building and delivered into bins, where it is stored preparatory to entering the hydrating machine. This machine is the modern pattern Kritzer hydrator, and has all the latest improvements. After passing through the hydrator the product is spouted by a belt conveyor into the basement, thence across and on to another elevator to the third floor, where it is screened by a double Jeffrey's screen. This screen has two chutes, the screened hydrated product being dropped into two bins, one over the Urschel-



VIEW FROM QUARRY OF STANDARD LIME AND STONE COMPANY, OAKFIELD, WIS.





HYDRATING PLANT, LIME KILNS AND CRUSHER HOUSE OF THE STANDARD LIME AND STONE COMPANY, OAKFIELD, WIS.

Bates bagging machine, the other chute carrying the tailings into a machine manufactured by the Allis-Chalmers Company, consisting of rolls, which pulverizes the tailings. They are then conveyed back to the screens and into the bins.

Under the bags on the Urschel-Bates bagger a grating has been made so that any of the material which gets out of the spouts and is not put into bags, instead of accumulating falls through the grating and on to a belt, which carries the first hydrated product from the hydrator across to the elevator, back into the screen, and then into the bagging machine again. Consequently there is no loss of material; neither does it accumulate the dirt from the floors.

The power for both the crushing plant and the hydrating plant is furnished by three Atlas engines, sixty-five horsepower each, with 100-horsepower boilers.

In the hydrating plant they have the Morse gasoline engine for use in case of emergency. The crushing plant is on the opposite side of the railroad track, so that the cars can be loaded with crushed stone from the bins on one side, or with lime on the other.

The stone is carried down from the quarry to the crusher by wagon and dumped into a No. 5 Austin crusher; from the crusher it is spouted into elevators, carried to the screens for separation of sizes, and from there spouted into three storage bins, which have a capacity of five cars. About 150 yards of stone is crushed per day, and it is marketed in Fond du Lac.

The water supply is furnished from a spring, being pumped by a gasoline engine into a 150-barrel tank at the top of the ledge, a distance of 125 feet.

The company has provided cottages for the laborers and a boarding-house, all of which are attractively designed, with special attention to hygienic conditions.

This same firm are also building a plant to be known as the Badger Pressed Brick Company. They will manufacture brick from the shale and clay in the vicinity. The machinery for this plant is now being installed.

The hydrating plant, since its first day, has been operating to the highest satisfaction of the officers of the company. Not a single incident has occurred to mar its program.

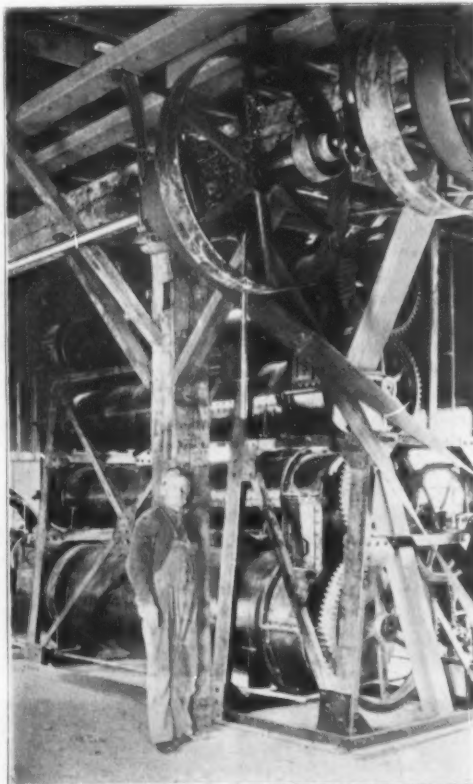
Within the last month two large fires have started at the plant of the Rockport-Rockland Lime Co., of Rockport, Me. Eight of the wooden structures about the kilns and a large store of cooerage stock were destroyed. The loss is about \$75,000.



PATRICK MURPHY, IN CHARGE OF THE PLANT—VIEW OF URSCHER-BATES BAGGER.

### Blair Stone Company's New Plant.

PHILADELPHIA, PA., Sept. 18.—The Henry S. Spackman Engineering Company recently completed the plant of the Blair Limestone Company at Canoe Creek, near Holidaysburg, Pa. This plant consists of six vertical steel incased kilns and will have an output of about ninety tons of burned lime per day. The buildings are all of steel with reinforced concrete floors and are fireproof throughout. The stone is charged into the top of the kilns by cars, which ascend by gravity from the quarry on the side hill above the plant. A large storage capacity is provided for at the top of each kiln, so that the kilns can run without charging over Sunday. One of the interesting features of this plant, and probably the only thing of its kind in this country, is a large cooling hopper attached to the kiln, by means of which the lime is cooled to such an extent that it can be loaded almost directly into cars without the delay encountered by old methods. Induced suction draft is used in all the kilns.



THE HYDRATOR—WHEN KRITZER WEARS OVERALLS.

### Endorsement for Combustion Utilities System.

Mr. T. E. Fleisher, general manager of the Sheboygan Lime Works, Sheboygan, Wis., writes us that on a two months' strict test he finds the Eldred Process "a winner," and advises that every limeburner in the United States look into the matter. He says that average for the two months' test shows 4 1/4 lbs. of lime to 1 lb. of coal and that the product is of a more uniform grade than that produced by the old wood kiln system. He further states that he is preparing to equip his entire plant with the Eldred process.

### Municipal Lime Plant.

ST. LOUIS, MO., Sept. 20.—The Mayor and other officers of St. Louis have had under consideration for some time the question of constructing a municipal lime plant. Commissioner Adkins has had charge of the matter and has submitted estimates of the cost. With a municipal lime plant it is believed that this city will save many thousands of dollars each year. The north end of the Chain of Rocks is considered to be the best location for the plant.

### New Firm of Coast Block Makers.

SEATTLE, WASH., Aug. 20.—The Natural Stone Process Company has been organized here with a capital stock of \$25,000. The company consists of George Hames, J. J. Franklin and Will A. Curless.

The Vermont Lime Co., Greenfield, Mass., are making extensive improvements at their plant at Sherman, Vt. They are building a new storehouse, two new kilns and a cooerage shop.

The entire plant of the Sulphur Springs Lime Works at Sulphur, Ark., was destroyed by fire last week. The loss is about \$3,000, including cooerage stock and 250 cords of wood. The work of rebuilding the plant will begin immediately.

Wayne Whitehall and Lee Dotson, who are now engaged in the contracting business at Silver City, N. M., are about to organize a lime company. They have secured a stone quarry and have two kilns, of 400 bushels capacity each, now in operation. The stone at this quarry is excellent for building purposes and the lime kilns will be worked as a side issue. The lime will be burned by coal. They will market their product locally, there being no other lime kilns in that vicinity.

M. Hope & Son, Hanover, Pa., who several months ago leased their quarries and lime kilns to the American Sand & Stone Company of Baltimore, have resumed control of their property and are producing lime. The Baltimore company was not working the quarries to their full capacity and made little effort to supply the trade established by the local firm.

A. W. Morris has resigned his position as manager of the Ozark Lime Company's branch at Little Rock, Ark., and has been succeeded by H. A. Phillips.

The Piedmont Slate & Cement Co., Atlanta, Ga., of which E. C. Lester is president and G. A. Beattie general manager, is arranging the establishment of lime kilns and a Portland cement plant on the road of the Seaboard Air Line. They will establish a hydrating plant at the lime kilns.

Harry C. Sloan of Jacksonville, Fla., and W. L. Van Duzer, of Kissimmee City, Fla., are interested in a company to be known as the Pineola Hydrated Lime Company and are now completing its organization. The erection of a plant will follow shortly.

Lohse & Miller, Booneville, Mo., whose quarry is located on the river near this place, have one lime kiln and manufacture black lime, the burning of which is done by wood and coal. Mr. Lohse informed the ROCK PRODUCTS representative that their trade is mostly local. The railroad, to secure more yard room, has cut their property in such a way as to prevent them from further developing their quarry.

After a continuous operation for forty years, the lime kilns located at Radnor, Ohio, have been closed. This is the result of the recent merger of the lime and stone quarry interests in this vicinity with the Western Lime & Stone Co.

### New Corporations.

The Smith Lime Flour Company of Elizabeth, N. J., has been incorporated for \$25,000, by Frank R. Smith, Arthur P. Topf and J. T. Hague. They will manufacture lime and will handle clay, sand, cement and other building materials.

The Richfield Lime Company of Richfield, Utah, has been incorporated for \$5,000. The officers of the company are R. A. Farley, president; Fred L. Nelson, vice-president, and W. T. Ogden, secretary.

The Stearns Lime Company, Danbury, Conn., has increased its capital stock from \$10,000 to \$60,000.

The American Lime and Stone Company has been organized at Marion, Ohio. The incorporators are A. C. Edmundson, Henry A. Schuler and others. The company's quarries are located near those of the Central Ohio Lime and Stone Company. The quarry land has been stripped and the work of building kilns will soon be started.



LIME KILN AND PLANT OF THE BLAIR LIME-STONE COMPANY, CANOE CREEK, PA.

# Cement.

## The Demand Keeps Up.

To the layman and consumer of cement the announced organization of many new companies in all sections of the country and the various claims of the promoters, whose only interest in many cases is the floating of securities for the payment of their personal commissions, would seem to point to an over-production of Portland cement in 1908. The fiscal year of 1906, which ends in June, 1907, shows, according to the report of the United States Geological Survey, that there were 46,463,122 barrels of Portland cement produced, together with a production of some 4,000,000 barrels of natural cement and 481,224 barrels of puzzolan. To the initiated, however, there is no danger of an over-production, for the reason that the great and growing demand in America is taking practically every barrel of the domestic product. There is an abundant market in Mexico, Cuba and many other foreign countries which the busy American manufacturer has not really had time to look after. The pessimist, therefore, should try to absorb the views of the progressive though not necessarily optimistic American, that the Portland cement manufactured in this country is on an average better in every respect than the imported article, and when such time does come that there is cement to spare over the growing needs of our country the foreign markets will be entered and controlled by that which always rules in the long run—quality.

## Plants Working to Their Full Capacity.

The mills of the Lehigh Valley are all busy, and the same condition exists in all parts of the country at this time.

The Atlas cement plant, which closed down partially several months ago, is now running all departments full up and shipping its full quota seven days a week. They are not only taking care of the entire output of the plant but are drawing heavily on the stock accumulated during the early spring.

The plant of the Lawrence Cement Company at Siegfried's is also turning every wheel, and with the close of 1907 will have one of the largest years in the history of this old concern.

The New Jersey district of the Lehigh Valley is having its share of the busy times. The Edison plant at New Village now has a capacity of practically 7,000 barrels a day and with the help of its very able sales department is placing this brand on many of the important construction works now in course of erection in the East and Middle West.

The Whitehall plant at Cementon is working to its fullest capacity and our genial friend Howard B. Green advises that the sidewalks on "Easy Street" are laid with "Whitehall" from foundation to top finish.

The several mills manufacturing the old reliable "Giant" are all working to the top notch, and this established brand is still in demand on the important works of any magnitude in the East.

The plant of the Vulcanite Portland Cement Company at Vulcanite, Warren County, N. J., is in such complete and up-to-date shape under the supervision of Superintendent W. R. Dunn that even with the increased orders requiring the continual running of every producing portion of the plant there is not a hitch in the steady and constant production of this well-known brand.

Penn-Allen, Bath, Phoenix, Nazareth, and in fact all of the Valley mills, are sharing in the general prosperity of 1907.

The Art Portland Cement Company at Kimmel, Ind., which has been idle a greater part of the summer, is now in the field again.

January 1, 1908, is the date set for the completion of the 2,000-barrel capacity plant of the Southern California Cement Company.

## FROM ALL SECTIONS.

The Seaboard Portland Cement Company of Kingston, N. Y., have increased their capital stock from \$100,000 to \$5,000,000. This plant is now in course of construction and will come into bearing toward the middle of next season.

With the increase in output of the Universal Portland Cement Company promotions of all those connected with this enterprising concern are constantly being made. C. J. Connell has been appointed assistant secretary in charge of the accounting department and Frederick Blanchard is now in charge of the credit and collection department in the Chicago office.

The Utah and Nevada Cement Company, with property in Southern Nevada, has just been organized at Salt Lake City, Utah. The officers are: President, John Sharp; vice-president, C. S. Tingey; treasurer, James Christiansen, and secretary, C. H. Tingen.

Homer C. Millen, son of Thomas Millen, the latter a pioneer with D. O. Saylor in the manufacture of American Portland cement, has purchased the cement plant at Chelsea, Mich., in which William G. White of chewing-gum fame was formerly interested.

The Sandusky Portland Cement Company is one of our busiest concerns these days. They have about completed a modern plant at Dixon, Ill., and are installing additional railroad facilities for the transportation of marl to their Syracuse, Ind., plant.

The Westinghouse-Church-Kerr Company of New York have been awarded a contract for the construction of a 3,000-barrel plant for the Ajax Portland Cement Company about six miles from Independence, Kan. This is another plant which will come into bearing during the early part of next year.

Carlyle, Kan., has another prospective 3,000-barrel Portland cement mill, to be erected by the Lumberman's Portland Cement Company. The capital stock of the company is \$2,500,000. Prominent Kansas men are interested. Among them are B. F. Cobb, W. E. Woods, J. W. Ferguson, F. M. Russell, J. M. Byrne and M. B. Nelson.

The label under which the Portland cement to be manufactured by the Dealers' Cement Manufacturing Company, another entry in the list of Kansas plants at Chanute, Kan., is one which has a wide reputation. It is "The Black Cat," the emblem of the Hoo-Hoos, the strongest lumbermen's association in this country.

Dr. Edgar Everhart, chemist of the Geological Survey, presents a very encouraging report on the lime and shale situation in the State of Georgia between Atlanta and Birmingham, Ala. There is only one Portland cement mill in Georgia, that at Rockmart.

The Helderberg Cement Company recently held their annual meeting at Albany, N. Y., and elected the following directors to serve for the ensuing year: President, T. Henry Dumary; vice-president and general manager, F. W. Kelly; secretary, Edward L. Pruin; treasurer, J. C. Farrell.

The clay house of the Northwestern State Portland Cement Company, which is approaching completion at Mason City, Iowa, was seriously damaged by a windstorm. Steps were taken at once to reconstruct, and work on this plant goes merrily along.

The Maringo Portland Cement Company, a projected Michigan plant, has just filed notice of decrease of its capital stock from \$1,500,000 to \$1,000,000. George L. Holmes of Detroit, Mich., is president of the company.

Another projected Michigan enterprise is the Muskegon Portland Cement Company, with a capital stock of \$1,000,000, which has acquired rich marl deposits in the northeastern part of Muskegon County.

A recent disposal of the property of the Round Top Cement Works in the Hagerstown (Md.) district is another step in the gradual passing away of the natural cement works in this country. Some twenty years ago, when the Portland cement industry was in its infancy, natural cement was produced to the extent of 6,000,000 to 7,000,000 barrels a year.

## Extensive Improvements.

The United States Portland Cement Company have increased the capacity of their mill at Bedford, Ind., by the addition of three new Gates mills and a new dryer. Another dryer will shortly be installed. An Ingersoll-Rand air compressor and two large turbines, electrically driven, have been added to the power equipment. One of these dynamos is 1,000 kilowatts and is of the Curtis make. The entire plant is equipped with electricity. By the installation of this new machinery to their already well equipped plant, Mr. E. W. Shirk, president of the company, says that they have practically doubled their capacity, and that their ten kilns now average 230 barrels each per day.

This company have had a very good season. Their brand is well and favorably known and the increase in capacity was made necessary by their rapidly growing trade.

## QUARTERLY MEETING.

### The Manufacturers Assemble at Atlantic City and Feel Good Over the Prospect.

The quarterly meeting of the National Association of Portland Cement Manufacturers was held at Atlantic City September 10 and 11, at the Marlborough-Blenheim Hotel.

The first day's deliberations were of an executive character and the discussions, which, of course, were for members only, consisted of reports and a general review of business conditions. These gave the sky a silver lining, or, in other words, established the fact that the Lehigh Valley mills showed less clinker on hand August 1, as well as finished cement, than during the past six months. This is particularly gratifying, inasmuch as trade dragged more or less during the spring and summer months.

Another satisfactory phase of the situation was that while large orders for railway and Government constructions have not materialized as anticipated, the continuous run of orders called for by wire and otherwise changed what might have been a funeral at the last meeting to a love feast. One condition that developed in conversation with manufacturers present was that while current prices throughout the country are far from what they should be, yet business conditions are better than for three or four months, notwithstanding the well known fact that the increase in capacity may have considerable bearing on the market this fall. The scarcity of business earlier in the season and the further fact



that for two years past everybody has been behind with orders and expected the same conditions to continue led many to believe that business is bad because the factories are catching up with shipments.

Of course what the future will bring forth in the next six months is difficult to figure out. Cement manufacturers have increased their production to such a material extent that it takes a bunch of orders nowadays to keep their warehouses down to a normal stock, and as some of the largest operators have only run part or half the time of course it has been instrumental in materially improving the situation.

In conversation with a large manufacturer the other day we were very much pleased to learn they are getting a pile of orders on hand again. Of course they have been quite aggressive and the result is that they have practically enough orders to take care of their output for the rest of the year. This is certainly a favorable sign.

While bathing in the Atlantic with one manufacturer he tersely stated that fluctuating prices were the worst thing possible for the industry. If some means could be adopted to prevent cement going far beyond a reasonable price one year and the next year groveling down to the cost basis, it would encourage more building and not keep the manufacturer, dealer and consumer on "Uneasy Street." As long as the industry is new and its growth so rapid we cannot expect any particular action on this question, but as time goes on more harmonious action is bound to prevail in the cement industry. This will mean uniform prosperity and will eliminate gambling in the industry, which has been more or less harmful at all times.



It developed at this meeting that men could talk against time, as the manufacturers are able orators, even if they had to select their subjects as they went along. The sales departments were very well represented at this meeting, Michigan being the only section not represented.

#### THE ATTENDANCE.

Among those in attendance at the meeting were:

A. M. Hoover, Charles H. Zender and E. M. Huber of the Alma Cement Company, Wellston, Ohio.

W. P. Corbett and Max Cappus, Alsen's American Portland Cement Works, New York.

Robert W. Lesley, R. E. Griffith and C. M. Camm, American Portland Cement Company, Philadelphia.

George W. Roydhouse and J. B. Franks, Bath Portland Cement Company, Bath, Pa.

George T. Burridge, Bonneville Portland Cement Company, Philadelphia.

George W. Hackett and Charles L. Johnson of the Castalia Portland Cement Company, Castalia, Ohio.

J. W. Kittrell, Catskill Cement Company, Cementon, N. Y.

Norman D. Fraser and J. W. C. McDaniels, Chicago Portland Cement Company, Chicago, Ill.

William H. Harding, Abraham Israel, Charles M. Saeger and H. Hartsell of the Copley Cement Manufacturing Company, Philadelphia.

Conrad Miller, Joseph Brobston and C. Weber Jones of the Dexter Portland Cement Company, Nazareth, Pa.

W. S. Mallory, Edison Portland Cement Company, Stewartsville, N. Y.

Fritz Worm, German-American Portland Cement Works, La Salle, Ill.

George F. Bayle and E. D. Douglas, Glens Falls Portland Cement Company, Glens Falls, N. Y.

F. M. Kelly, the Helderberg Cement Company, Albany, N. Y.

E. Bravender and F. E. Wade, Hudson Portland Cement Company, Hudson, N. Y.

G. E. Nicholson and A. B. Cockerill, Kansas Portland Cement Company, Iola, Kan.

O. C. Johnson and L. V. Clark of the Lawrence Cement Company of Pennsylvania, Siegfried, Pa.

Edward M. Young, Lehigh Portland Cement Company, Allentown, Pa.

F. E. Dickinson and N. W. Duncan, Marquette Cement Manufacturing Company, La Salle, Ill.

Deuane Millen of the Thomas Millen Company, Wayland, N. Y.

A. W. Paige, P. H. Hampson and Chas. Warner, Nazareth Cement Company, Nazareth, Pa.

William R. Yeager, W. E. Erdell, S. G. K. Stradley, Penn-Allen Portland Cement Company, Allentown, Pa.

William N. Beach and Robert E. Bonner, Pennsylvania Cement Company, New York City.

A. H. Craney, H. Struckman, H. C. Enright, St. Louis Portland Cement Company, St. Louis, Mo.

C. F. Harwood, Superior Portland Cement Company, Charlestown, W. Va.

Ed M. Hager, B. F. Affleche and E. M. Rader, Universal Portland Cement Company, Chicago, Ill.

W. R. Warren and Dane E. Rianhard, Virginia Portland Cement Company, New York City.

J. B. Lober, W. R. Dun, Albert S. Moyer, S. W. Hartwell and Charles Barr of the Vulcanite Portland Cement Company, Philadelphia, Pa.

George S. Bartlett, Western Portland Cement Company, Milwaukee, Wis.

W. C. Kent and Howard B. Green, Whitehall Portland Cement Company, Philadelphia.

Henry Longcope, Alpha Portland Cement Company, Easton, Pa.

G. A. Schneebeli, Allentown Portland Cement Company, Allentown, Pa.

A. C. Mott, C. M. Mott and W. Padden, Buckhorn Portland Cement Company, Bellefontaine, W. Va.

H. E. Hackenburg and R. A. Creider, Iroquois Portland Cement Company, Caledonia, N. Y.

Charles A. Matcham and H. G. Barnhurst of the Fuller Engineering Company, Allentown, Pa.

J. W. Fuller, Jr., R. S. Weaver and Floyd Moyhany of the Lehigh Car, Wheel and Axle Works, Catsaqua, Pa.

H. G. Kimball of the Kent Mill Company, New York City.

D. C. Dearborn of the Automatic Weighing Machine Company Newark, N. J.

F. H. Angell of the Jeffrey Manufacturing Company of Columbus, Ohio.

S. H. Payne of the Power and Mining Machinery Company, New York, N. Y.

George S. Emrich, Nazareth, Pa.

C. Earle E. Bottomley, secretary of the Association of Cement Manufacturers, Philadelphia.

Washington Harder, The W. F. Hartranft Cement Company, Philadelphia, Pa.

Mr. Hall of the Bradley Pulverizing Company, Boston, Mass.

Ross B. Mateer of the Combustion Utilities Company, New York City.

George W. Roydhouse, the banker and cement man, had about as much fun at the convention as some of the youngsters.

W. W. Harding of the Copley Company and Charles Matham of Allentown, Pa., had their families at Atlantic City and spent part of their time with us.

C. F. Burt of the Burt Portland Cement Company of Belleville, Mich., accompanied by F. Haywood of the Sales Department, was a Chicago visitor during the past month.

Mrs. George W. Hackett and Mrs. F. P. Franks of Bath, Pa., were in the ladies' party.

C. P. Jameson of Northampton was one of the missing ones.

H. G. Kimball of the Kent Mill Company, New York City, is always present and a welcome member of the lobby.

George B. Nicholson, on account of his various new plants, is one of the largest operators in the Far West, and when his Iowa and other plants are completed, will probably be numbered among the big three. He makes headquarters at Iola, Kan.

The question of grinding was a very serious one to Emerich, Miller, Payne, Hall, Anyell, besides numerous manufacturers of cement.

#### BRICQUETTES COLLECTED ON THE BOARD WALK.

Lost, strayed or stolen, one wheel chair.

The Board Walk furnished many attractions for the visitors, but Tuesday was largely occupied by the business meeting and the manufacturers' dinner in the evening.

Ernest R. Ackerman, president of the Lawrence Cement Company of Pennsylvania, has recently returned from a trip abroad. He is very much interested in automobiling and commented on the recent criticism on fast and careless driving as the first thing that came to his notice after returning from Europe, where he found measures were being taken to protect the friends of the automobile, and stated he expected the same action to be taken in this country.

E. M. Hager of the Universal reports their new mill at Pittsburg, as well as additional plants near Chicago, will shortly be completed; the Chicago plant about October 1 and the Pittsburg plant November 1. The machinery and material are all on the grounds, and it is only a case of completing their plant and warehouses.

C. F. Harwood of the Superior Portland Cement Company attended the meeting for the first time and was pleased with the reception accorded him.

Norman D. Fraser remarked that the completed addition to their plant would be in operation by the middle of November and would be one of the best plants in the West. When Mr. Fraser says anything people can rely on it. General Manager Drummond of this company has recovered from a very severe illness and is back home at their La Salle mill.

Thomas McGiff of the Atlas Company of Chicago has been visiting his old home and incidentally spending a week or two at the headquarters in New York.

Everybody in the cement and kindred lines must get busy, for the output of all the mills now in operation must be consumed during 1908. Publicity in all its forms, not only for the dealer but consumer, must be considered and intelligently worked out for the next six months.

#### REGULATION AND CONTROL OF CEMENT CONSTRUCTION.

By E. S. LARNED, C. E.

The rapid changes and developments during the past five or six years in municipal works, railroad construction, terminal improvements and rapid transit, and in building construction for manufacturing, mercantile and residential uses, have furnished the theme for many contributions to engineering and cement publications, and are strikingly reflected in the wonderful expansion of the Portland cement industry, the production during 1906 of 45,610,822 barrels showing an increase of 438 per cent over the output of 1900, and about 26 per cent increase over the previous year, 1905.

The manufacturer of Portland cement is now confronted with a situation both gratifying and alarming. His product is growing in favor; nevertheless, he is in danger of serious injury, only temporary, to be sure, but none the less real, from the friends and advocates of his product, some of whom, in their zeal, inexperience and unlimited confidence attempt the impossible, or perhaps are quite impossible in the attempt, however legitimate.

The extent of public interest at this time in cement construction cannot be measured by the present output of our Portland cement mills, and when the known desire to build in cement comes to be fully realized on the part of our laboring classes, artisans, clerks and farmers, this vast army of homeseekers and homemakers, the output of the cement mills must show a further increase that will dwarf even the present handsome figures.

The great problem confronting us now is to properly and adequately meet, foster and encourage this widespread interest and yet not permit it to grow beyond a safe control. By this I mean that every effort should

be made to avoid and prevent the mistakes, failures and disappointments that surely attend undue haste and want of preparation in the way of proper design, intelligent supervision and employment of trained and experienced men. All this has been found necessary to avoid failure, in the use of other materials of construction. Then why not in the use of the plastic material?

It will not add to the cost of construction in cement to effect this, but rather results in economies through greater efficiency and better progress alone. The same proportion of unskilled or common labor may be used, only we should seek to train and improve it, and always keep it under competent supervision in constant attendance.

The general public—as well as architects, engineers and contractors—must be brought to recognize the fact that while cement in concrete construction is a very important element, nevertheless, the other materials with which it is combined and the manner of mixing and placing the materials and the forms to contain them are also of prime importance and should be submitted to the same inspection, preliminary tests and approval of competent authority as may usually be required of the cement.

The proportion of sand to cement should never be fixed in advance of sufficient knowledge of the character and quality of sand available for the work in hand. If this be found inconvenient or seemingly impractical, then the proportions should be open to easy adjustment and should be provided for in advance in the contract. Available and proposed sand should always be tested and compared with some recognized standard before use.

The public demand for cement construction cannot be met at this time, not for want of cement, but because we have relatively so few builders and contractors qualified by experience to undertake this class of work, and showing the cumulative effect of such a condition, this fact has in a large measure prevented architects from designing in concrete and urging its adoption for residential uses.

A most promising and encouraging feature in the industry, however, is the organization of construction companies, officered by engineers and experienced contractors, who are making a specialty of concrete work, and it is perfectly reasonable to expect that their efforts will result in further improvements and economies in ways and means, also in the appearance and quality of finished exposed surfaces, a field already affording great possibilities and much promise.

In the flush of their first successes, however, let these companies pause and consider the danger of allowing their work to grow beyond their capacity to properly direct and control.

The cement industry cannot rest satisfied with a national interest in the product at this time, but must create even a broader confidence by the encouragement of prudent and rational safeguards, lest their omission be followed by unfair and discriminating restrictions on the part of local municipal building commissions.

Trade jealousies are keen and alert, and every failure or disappointment in concrete construction, however infrequent or unimportant, is amplified and accentuated.

It was thought at first that this publicity would seriously retard the progress of the new industry, but not so, and this can only be taken as further evidence of the wonderful vitality of this form of construction. It has also come to be generally known and admitted, as a result of rigid and thorough investigation, that each instance of failure has been the result of ignorance or criminal carelessness, and, almost without exception, has occurred during construction. Is any material of construction proof against such causes?

The scores upon scores of splendid examples of concrete construction, in all departments of engineering work, and among all classes of buildings, leave no room for doubt of its success from the standpoint of adaptability, appearance, economy and durability, under conditions of exposure that no other material now used in construction can so successfully and economically meet.

The greatest economy and best results structurally and architecturally, however, cannot be obtained except by competent design and intelligent, sympathetic treatment of outline and texture, with due regard to environment, exposure and available materials composing the aggregates, of which we have an endless variety, by selection and combination. And then the work of construction must have the equivalent in intelligent and honest supervision that any reputable job receives; in fact, it might have even more, and still cost less than is represented in the person of the boss-carpenter, boss-brick-mason, general foreman, sub-foreman or superintendent, all of whom are in constant attendance.

No other department in the cement industry has so felt the need of standard specifications and uniform instructions as we find in the manufacture of cement blocks.

There is today a large and growing demand for this material, and its general and almost unlimited use is only retarded by lack of confidence on the part of architects, builders and resident owners, who see only the wretched results that attend the efforts of the inexperienced and overlook the splendid possibilities of this form of construction in the hands of skilled and experienced operators.

In considering the requirements that cement blocks should meet as a structural material, we must take into account the use in which they are to be put.

We have in brick classification the terra cotta brick, mud brick and dry-pressed face brick, and the hard-burned, medium and light common brick, all of which find extensive and legitimate use and yet vary widely in strength, fireproof qualities and appearance.

The granites, limestones, sandstones and marbles are generally accepted in first-class construction, and yet differ greatly in weather- and fire-resisting qualities. Lumber, of course, is very combustible, and yet the different varieties show marked contrast in strength, durability and fire-resisting qualities, and we have to learn of any municipal requirement stipulating the kind of lumber for building construction. With these facts in mind, is it not fair to ask that some latitude be granted in the manufacture and use of cement blocks?

If an owner, in most localities, chooses to build the outside walls of his factory or residence of light-burned common brick, showing an absorption of 30 per cent water, who is there to say no? In fact, the average so-called hard-burned brick will absorb from 20 to 22 per cent water and will pass muster under most municipal and architects' requirements, yet our leading municipal specifications require that cement blocks shall not exceed 15 per cent absorption, regardless of the use to which they are put.

Cement blocks may properly be used in substitution of other materials for:



1. Foundations.
2. Exterior and superstructure walls carrying weight.
3. Curtain walls, exterior and interior.
4. Fire walls and partitions.
5. Veneering.
6. Retaining walls.
7. Cornice, trim and ornamental work.
8. Filler blocks for floor slabs.
9. Chimney flues, etc.

In this variety of work it is at once seen that uniform and the highest quality is not required.

Experience in the use of other materials has taught us to recognize, practically without repeated or preliminary tests, the quality of most materials for which cement blocks are substituted, and this fact alone gives them an advantage over the newer material.

Commercial, local and natural causes are, however, calling for the more extensive use of cement blocks. This demand will increase as our manufacturers of cement blocks gain experience, and by the encouragement and observance of rational building requirements. It is of prime importance to every city and town in this country having a building code that they should recognize and include cement blocks as a building material.

The writer, as chairman of the committee on tests of cement and cement products of the N. A. C. U., recommended in his report, last January, that a specification committee be appointed by the association to draw up a standard specification and uniform instructions covering the manufacture of cement blocks, with the hope that this form, when prepared, might be offered to all the cities and leading towns in the United States for adoption.

As a basis upon which to consider the standard specification and uniform instructions, my suggestions included the following, in part:

#### Cement.

Only a true high-grade Portland cement, meeting the requirements and tests of the standard specifications of the American Society for Testing Materials, shall be used in the manufacture of cement blocks for building construction.

#### Unit of Measurement.

The barrel of Portland cement shall weigh 350 pounds net, either in barrels or subdivisions thereof, made up of cloth or paper bags, and a cubic foot of cement packed as received from the manufacturer shall be called 100 pounds or the equivalent of 3.8 cubic feet per barrel. Cement shall be gauged or measured either in the original package as received from the manufacturer or may be weighed and so proportioned, but under no circumstances shall it be measured loose in bulk, for the reason that when so measured it increases in volume from 29 to 35 per cent, resulting in a deficiency of cement.

#### Proportions.

Owing to the different values of natural sand or fine crusher screenings for use in mortar mixtures, due not only to its mean effective size, but also to its physical characteristics, it is difficult to do more in a general specification than fix the maximum proportion of good sand that may be added to cement.

#### Sand.

Sand, or the fine aggregate, shall be suitable siliceous material passing the one-fourth inch mesh sieve, and containing not over 10 per cent of clean, unobjectionable material passing the No. 100 sieve. A marked difference will be found in the value of different sands for use in cement mortar. This is influenced by the form, size and relative roughness of the surface of the sand grains, and the impurities, if any, contained. Only clean, sharp and gritty sand, graduated in size from fine to coarse and free from impurities, can be depended upon for the best results. Soil, earth, clay and fine "dead" sand are injurious to sand, and at times extremely dangerous, particularly in dry and semi-wet mortars, and they also materially retard the hardening of the cement. An unknown or doubtful sand should be carefully tested before use to determine its value as a mortar ingredient. Screenings from crushed trap rock, granite, hard limestone and gravel stones are generally better than bank sand, river sand or beach sand in Portland cement mortars (but not so when used with natural cement, unless the very fine material be excluded).

So-called clean, but very fine, sand has caused much trouble in cement work, and should always be avoided, or, if impossible to obtain better, the proportion of cement should be increased. Stone screenings and sharp, coarse sand may be mixed with good results, and this mixture offers some advantages, particularly in making sand-cement blocks.

For foundations or superstructure walls exposed to weather, carrying not over five tons per square foot, the maximum proportion shall not exceed four parts sand to one part cement. This proportion, however, requires extreme care in mixing for uniform strength and will not produce water tight blocks. We recommend for general work not over three parts sand, if well graded, to one part cement, and the further addition of from two to four parts of clean gravel stones passing the three-fourths inch mesh sieve and retained on a one-fourth inch mesh sieve, or clean screened broken stone of the same sizes. These proportions, with proper materials and due care in making and curing, will produce blocks capable of offering a resistance to crushing of from 1,500 to 2,500 pounds per square inch at twenty-eight days.

(For the best fire-proof qualities limestone screenings or broken sizes should be excluded, but otherwise are all right for use.)

Where greater strength is desired, particularly at short periods, from two to six weeks, we recommend the proportions of one part cement, two parts sand and from one and one-half to three parts gravel or broken stone of sizes above given. Blocks made of cement, sand and stone are stronger, denser, and consequently more waterproof, than if made of cement and sand only, and are more economical in the quantity of cement used.

**Mixing.**—The importance of an intimate and thorough mix cannot be overestimated. The sand and cement should first be perfectly mixed dry and the water added carefully and slowly in proper proportions and thoroughly worked into and throughout the resultant mortar; the moistened gravel or broken stone may then be added either by spreading same uniformly over the mortar or spreading the mortar uniformly over the stones, and then the whole mass shall be vigorously

mixed together until the coarse aggregate is thoroughly incorporated with and distributed throughout the mortar.

We recommend mechanical mixing whenever possible, but believe in the thorough mixing of cement and sand dry before the addition of water. This insures a better distribution of the cement throughout the sand, particularly for mortar used in machine-made blocks of a semi-wet consistency. For fine materials, such as used in cement blocks, it is necessary that the mechanical mixer be provided with knives, blades or other contrivances to thoroughly break up the mass, vigorously mix the same and prevent balling or caking.

#### Curing.

This is the most important step in the process of manufacture, second only to the proportioning, mixing and molding, and if not properly done will result either in great injury to or complete ruin of the blocks. Blocks shall be kept moist by thorough and frequent sprinkling, or other suitable methods, under cover, protected from dry heat or wind currents for at least seven days. After removal from the curing shed, they shall be handled with extreme care, and at intervals of one or two days shall be thoroughly wet by hose sprinkling or other convenient methods. We recommend curing in an atmosphere thoroughly impregnated with steam. This method serves to supply needed moisture, prevent evaporation, and in some measure accelerates the hardening of the blocks.

We view with distrust, in the present knowledge of the chemistry of cement, any artificial, patented or mysterious methods of effecting the quick hardening of cement blocks or other cement products. If such method be proposed it should be thoroughly investigated by competent authority before use.

#### Time of Curing.

This is also most important in its effect upon the industry, and is directly and vitally influenced by the following conditions:

1. Quality, quantity and setting properties of the cement used.
2. Quality, size and quantity of the sand or fine aggregate used.
3. Amount and temperature of water used.
4. Degree of thoroughness with which the mixture is made.
5. Method of curing, weather conditions and temperature.
6. Density of the block as effected by the method and thoroughness of tamping or pressure applied.

Before fixing the minimum permissible time required in curing and aging blocks, it is well to consider the important effect of additions of sand upon the tensile strength of cement mortar.

The following tabulation has been interpolated from the diagram of cement mortar tests prepared by W. Purvis Taylor of the Philadelphia Municipal Laboratories.

The results of the neat tests and the 1 to 3 mortar tests (i. e., one part cement to three parts crushed quartz by weight) are averaged from over 100,000 tests, while the other results are based on from 300 to 500 tests.

Proportions.	TENSILE STRENGTH IN LBS. PER SQ. IN. OF PORTLAND CEMENT.									
	7 days.	28 days.	2 mos.	3 mos.	4 mos.	6 mos.	7 mos.	8 mos.	9 mos.	12 mos.
Neat cement	710	768	760	740	732	758	768			
1 to 1 mortar	590	692	690	680	680	685	695			
1 to 2 mortar	370	458	460	455	453	458	460			
1 to 3 mortar	208	300	300	310	310	310	308			
1 to 4 mortar	139	210	230	230	230	232	232			
1 to 5 mortar	80	150	185	195	195	195	197			

It must also be kept in mind that these results are obtained under practically uniform and theoretically correct conditions, in the amount of water used, thoroughness of mixing and molding and storage of samples until tested.

Comparing the results at twenty-eight days, it is apparent that the 1 to 5 mortar has only 71 per cent of the strength of the 1 to 4 mortar, and but 50 per cent of the strength of the 1 to 3 mortar. The 1 to 4 mortar has but 70 per cent of the strength of a 1 to 3 mortar and 46 per cent of the strength of a 1 to 2 mortar.

The ratio of compressive strength to tensile strength is not quite constant for all periods of time and for the several mixtures above given, but the compressive strength, or resistance to crushing per square inch, may be approximately obtained by multiplying the tensile strength given in the above table by the constant six (6). (Note: This would increase with the age of the mortar, and would be greater for good gravel or stone concrete than for the clear mortar of which a given concrete is made.)

In fixing the minimum time required for curing and aging blocks before use, due regard should be given to the proportions used. It is manifestly wrong in principle to require as long a period for a 1 to 2 or 1 to 3 block as might seem necessary for a 1 to 4 or 1 to 5 block, and it is obviously unsafe to attempt to use a block of lean proportions in as short a time as a rich mixture would gain the necessary strength.

This might be supposed to be met by fixing the minimum resistance to crushing of blocks (of all compositions), but it must be kept in mind that a very small percentage of the blocks used are tested, by reason of the expense, inconvenience or lack of facilities.

The required minimum resistance to crushing of first class blocks used for exterior and bearing walls should not be imposed upon blocks for minor and less important uses.

#### Marking.

All cement blocks should be stamped (in process of making), showing name of manufacturer, date (day, month and year) made, and composition or proportions used. The place of manufacture, methods and materials should also be open to inspection by a representative of the building department, the architect, engineer or individual buyer.

There are good commercial reasons for permitting and encouraging this, as it would at once create confidence and add to the reputation of the block offered. No honest and progressive manufacturer would object. Quality and appearance will at once create a market for cement blocks at profitable prices, in most any location, and all this is of easy attainment.

Let the intending manufacturer of machine-made blocks remember that the machine is simply a mechanical convenience, and it remains for him to use proper materials, correct and accurate methods of proportioning, mixing, molding and curing, to study and meet the demands of the building trade, and keep abreast and a little in advance of the other fellow in this progressive age.

#### Plans for a Concrete Trestle.

SPRINGFIELD, MASS.—The Turner Construction Company, the firm which is building the big plant of the Phelps Publishing Company, has submitted plans to the board of supervisors for a trestle of concrete construction to replace the trestle now in use at the city yard and which must be disposed of to make room for the Boston and Albany tracks. The plans call for a trestle built entirely of concrete, with opportunity for loading a half dozen or more cars direct from the cars by means of gates. The city annually pays \$1,800 for shoveling trap rock from the cars into the wagons, and this expense would be largely obviated with the building of the new trestle. In about four years the city could save the cost of the new trestle, estimated at \$7,500. The city council authorized the supervisors to spend not more than \$7,500 for such a trestle and it is probable that the Turner company will be given the contract.

#### Large Reinforced Concrete Building.

The Victor Talking Machine Company at Camden, N. J., will soon erect two reinforced concrete buildings. One structure is a six-story factory building 132 by 90 feet and the other a power house, one-story and basement, 173 by 70 feet. Ballinger & Perrot, Philadelphia, are the architects; Jay M. Whitham, Philadelphia, engineer, and the general contractors are J. S. Rogers & Co., Stanwick, N. J. The General Fireproofing Company of Youngstown, Ohio, have been awarded the contract for the reinforcing steel and the erection of the forms for the concrete.

#### Visits Among Chicago Cement Men.

C. A. Whyland, president of the Elk Cement and Lime Company, has spent the entire summer at the mill, Elk Rapids, Mich., and has now returned to his office in this city. Mr. Whyland says that the mill is running in excellent shape and they have a demand for all the cement they can manufacture. Recent tests made show that their cement is increasing in strength. The lime business was never better, and they have more orders than they can fill. Their crushed stone plant is furnishing the crushed stone for the Pere Marquette Railway, and they also have a large job furnishing the city of Manistee for road work.

N. D. Frazier of the Chicago Portland Cement Company said that they are exceedingly busy at their plant at Oglesby, Ill. Most of their trade is with the dealers in the smaller towns, and they do not go after the larger contracts very much. The additions they are making at the mill are not yet complete, and they are uncertain just when they will be able to commence operations. Several smaller parts of the machinery have not yet arrived. This has been the cause of the delay to a considerable extent.

C. H. Wood, manager of the Wolverine Portland Cement Company, said that their business was good. The country trade has been on the increase, and they have a few large contracts on hand.

Meacham & Wright are, as usual, filled up with a good line of orders for cement. They have several large contracts on hand which require daily deliveries.

The Marquette Cement Manufacturing Company report that their business is increasing with leaps and bounds, and tests of Marquette show that never in the history of the company have they turned out such a high-grade product as now. They have put another kiln in operation at their plant at La Salle, Ill., and operate their plant on the unit system. Each machine is operated by an individual motor, so that a mishap will not cripple the whole mill. They have just secured the contract to furnish the cement for the Chittenden-Eastman Building in Burlington, Iowa.

Mr. Leonard of the Lawrence Cement Company, 1 Broadway, New York, says the output of their cement plants this year will far exceed all former years by a large margin. The output of the company's mill at Siegfried, Pa., has been increased to over 5,000 barrels daily during the last year by adding extensive improvements to the same. When the new kiln and engine houses which are in course of construction are completed the output will be larger still. Much of this company's Dragon Portland cement is being used in the construction of the Pennsylvania Railroad improvements here.

## For the Retailer

### The National Builders' Supply Association

Meets Semi-Annually.

#### OFFICERS:

GORDON WILLIS	President
St. Louis, Mo.	
CHAS. WARNER	Vice President
Wilmington, Del.	
G. O. PERKINS	Vice President
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H. H. HALLIDAY	Vice President
Cairo, Ill.	
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JOHN J. KELLEY	Vice President
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HARRY W. CLASSEN	Treasurer
Baltimore, Md.	
HARRY S. WEST	Secretary
Toledo, Ohio	

Official Organ ROCK PRODUCTS.

#### Big Dealers at the Seaside.

At Atlantic City on September 10 there was a group of gentlemen who attracted the cement manufacturer because they are all large factors in handling building materials. There was Gordon Willis, president of the National Building Supply Association, St. Louis, Mo.; John A. Kling, president of the American Plaster Company and the Cleveland Builders' Supply Company, of Cleveland, O.; Charles A. Weiler of the Wisconsin Lime and Cement Company, Milwaukee; and our old friend Lincoln of Waldo Brothers, Boston. These gentlemen were watching the wild waves tossing upon the shore and were incidentally canvassing the situation. Each in turn reported business good.

In speaking of the National Association Mr. Willis said: "We will probably meet the last of this month or the first of next and decide upon the place for the next annual meeting. Several cities are anxious to have us meet with them, but we shall select the place with a view of securing the largest possible attendance. You know the National Association has been a great factor in promoting the interests of the dealer and is just as effective today as it ever was. Its strength has enlarged and broadened and what pleases me more than anything else is the fine spirit and broad-gauged idea that a fair deal shall be accorded manufacturer and dealer alike."

With reference to business conditions in New Eng-

land, Mr. Lincoln stated that the country trade was good. The small dealer is using just as much cement as usual, as well as other supplies. In looking into Waldo Brothers' office the other day, we were much impressed with the air of concern of their department heads, indicating that their order clerks were somewhat behind time.

John A. Kling is preparing to retire temporarily from the activities of the retail building material line, turning over to his associates in the Cleveland Building Supply Company the details of this large concern—Messrs. Miller, Beck and Black, and an additional member, Louis Powell, of the Fishack Plaster Company, thus forming a cabinet of able personnel. Mr. Kling will devote more of his time to the executive and sales department of the American Gypsum Company, which concern, by the way, have completed their new mill at Niagara Falls, giving them increased capacity and ability to handle larger business. They have been very fortunate in their increasing trade to never reach the point where they have been short of orders.

Charles Weiler, in speaking of the business in the Northwest and his company in Milwaukee and the various plants in that district, reports that business is much better than he had reason to hope for, considering the financial wail from the East, and he considers that the fall business would be most satisfactory. He stated that shortage of cars had not particularly hampered them up to this time and that the outlook was very encouraging.

#### Returning Empty Sacks.

A much mooted subject of interest to cement manufacturers and dealers is the shipment of empty cement sacks. Probably nothing has caused so much friction between the manufacturer and the user. In most cases the user is the responsible party, as he persists in neglecting to observe the simplest precautions in making shipments to the works of the cement companies. In order that credit may be



FINE WAREHOUSE OF JOHN SELL AT PITTSBURG, KAN.

given to the shipper, the following rules should be carried out:

Freight charges must be prepaid. Place in bundle only sacks belonging to the company to which you are making the shipment. No credit will be allowed for bags belonging to other companies.

Do not return sacks which have been wet, as they will not be purchased.

Sacks returned should be put in bales of fifty each, laid flat, securely tied at each end and properly tagged.

Bill of lading, together with letter covering number of bundles and sacks in shipment, must be mailed to the office of the cement company.

Torn sacks will not be purchased.

Count and inspection at the mill govern.

Several months ago the classification governing the return of empty cement sacks was not uniform; that is to say, the Western classification made it compulsory to properly bundle and tag and prepay freight charges on shipments of empty cement sacks, while such was not the case in the Eastern and Southern classifications. However, this has been remedied, and on August 1, 1907, the official classification committee issued Official Classification No. 30, from which the following is quoted:

Bags or sacks, empty, returned, must have a tag attached to each package showing the name of both consignor and consignee in full, and charges on same must be prepaid.

A short time after this the Southern classification committee issued the following classification:

Less than carload shipments of secondhand bags must be packed in bundles, securely tied, or in bales, and each bale or bundle must be tagged, showing the name of shipper and of consignee and destination. Freight charges on such shipments must be prepaid.

Unless these rules are observed by users of cement, there is a possibility of much more stringent rules being enforced by the railroad companies. There is now a proposition before the Western classification committee to box or crate empty cement sacks. Such a plan is not feasible and would work a great hardship among the users of cement.

On October 1 the following classification will be embodied in the Western classification:

BAGS OR SACKS: N. O. S. RETURN PREPAID. In boxes, bales or bundles—If in bales or bundles, to be securely bound with not less than three separate ties of wire or rope. (Rope to be not less than 3-16 inch in diameter.) Each package to be tagged with a linen tag, securely attached with wire. Tag to show name and address of both consignor and consignee.

Boxes also to be plainly marked with name and address of both consignor and consignee. One-half of fourth class. Failure to observe these rules will make the shipper pay more freight, as the shipment will be considered as fourth class.

F. P. VanHook, of the Portland Cement Company, Denver, Colo., has recently patented a device, made of very light iron bars or wire with a lever toggle fastener, which is made to hold fifty or one hundred bags laid out flat. Two metal tags are wired to the crate, one at each end.

#### Illinois Masons' Supply Executive Committee Meets.

The executive committee of the Illinois Masons' Supply Association held its regular meeting here recently. Several important questions pertinent to the welfare of the association were taken up and discussed. It has been decided to hold the annual meeting in conjunction with the Illinois Lumber Dealers' Association meeting, making it a joint convention, from February 10 to 17, 1908. It will be held at Brook's Casino, on Wabash Avenue and Peck Court. The first floor has 10,000 square feet of available space for exhibition purposes, and the assembly room on the second floor has accommodations for 400 people. The associations have decided that the hotels were not satisfactory, inasmuch as exhibitors were forced to have booths in disconnected rooms, and the dealers in attendance were so scattered during the day that it was almost impossible to get them together for sessions. By having the exhibits on one floor and meeting on the balcony they hope to do away with this trouble.

#### Activities of the Pacific Coast.

SAN FRANCISCO, CAL., Sept. 10.—Much activity was displayed in the construction and completion of buildings during the month of August, but the total of the building permits granted for new work started during the past four weeks is comparatively low for this city. The comparative figures for the principal cities of the Coast include: San Francisco building permits for August, \$2,971,125; Los Angeles, \$1,340,006; Oakland, \$691,261; San Diego, \$295,000; Portland, Ore., \$879,690; Seattle, Wash., \$832,016.

The importations of foreign cement in August at San Francisco comprised five cargoes, aggregating 67,737 barrels. There is a fair supply of foreign and domestic cement for present needs, but the importers have been more conservative about ordering the European article of late and fewer vessels are loading abroad for this port. It is estimated that the present stocks on hand aggregate about 40,000 barrels.

Sealed proposals for furnishing and delivering 14,000 barrels of Portland cement, 16,500 tons of broken stone and 7,000 tons of sand will be received until October 15 by C. W. Otwell, Captain U. S. Engineers, Honolulu, Hawaii.

The California Portland Cement Company's offer to the city of Santa Cruz, Cal., has been accepted. The company is to donate all of the cement needed for a reinforced concrete bridge which is to span the Southern Pacific Railroad tracks between Blackburn Terrace and the Lynch Hill on Bay Street, replacing an old plank bridge.

The Santa Cruz Lime Company has rented to the Santa Cruz Portland Cement Company a tract of fifteen acres of land on Bonny Doon Creek, near the present cement plant, for a term of three years, with privilege of renewal, at a rental of \$150 per month. The land is valuable for mining and quarrying.

Articles of incorporation of the Folsom Rock Company have been filed in Sacramento, Cal. Its purpose is to buy boulders and stone and break and crush the same for sale. Folsom is named as the location of the crushing plant, while San Francisco is to be the principal place of business. The directors are: W. E. Gerber, of Sacramento; F. D. Madison, of San Rafael; W. T. Barnett, of Berkeley; C. C. Sullivan, of San Francisco, and R. G. Hanford, of Folsom. The capital stock is \$1,500,000. The stock of the company is owned practically by the same persons who own that of the Folsom Development Company. The new company will crush the great piles of cobbles turned up by the gold dredges near Folsom. For several months the erection of a large crusher near Dredge has been in progress, and it will soon be in operation. It is a large jaw-

The outlook for new building construction during the fall is favorable, although the rush seems to be over



# AMONG THE MATERIAL MEN.

Scribo Visits Cincinnati's Leading Dealers in Builders' Supplies and Finds Them All Busy.

Good old Cincinnati! Coming to the "Queen City of the West" on the Monon we had quite an argument in the smoking compartment about just what Cincinnati means, after whom the town was named, and so forth. I wasn't quite sure myself, but thought it was named in honor of that old Roman farmer-patriot-politician who lived about 500 years before the Christian era and whom the populace used to call away from his plow every little while to act as dictator. A gentleman named Eckstein, who travels for a Chicago clothing house, said that was right. "Cincinnati," said he, "is the fellow that invented the beer keg." I tried to tell Eckstein that Gambrianus—they call it Gahmbreenus in Cincinnati—was the original beer brewer. "Well," said Eckstein, "that's all right too—Gambrianus is his other name. I've seen lots of pictures and statues of the old fellow in Cincinnati."

A college professor came in just then and settled the argument by stating that the city got its name because its founders were members of the Order of the Cincinnati, a patriotic organization composed of officers of the Revolutionary war. As the professor wore bifocal spectacles and also otherwise looked the part, Eckstein took his word for it. It seemed reasonable to me, too, and we let it go at that.

Well, I came to Cincinnati to see the material men, and I found them very material indeed—about as substantial a lot of business men as any line of trade in any big city can boast. And Cincinnati is a big city, with a big population of its own, thrifty and prosperous and surrounded by an equally large suburban population, you might say, equally thrifty and equally prosperous.

## The Moores-Coney Company's Offices and Plants.

It was with a feeling bordering on fear and full of creeping sensations that I approached the elevator which would lift me to the well appointed offices of the Moores-Coney Company on the fifteenth floor of the Union Trust Building. The reason for this misgiving sensation was the knowledge that W. W. Coney was looking for me and it seemed to me the only way possible to sidestep his wrath would be to adopt an alias. This, however, was not necessary, as I will explain later, after telling you about their enterprise.

The Moores-Coney Company is without doubt one of the busiest concerns handling building supplies in the city of Cincinnati, and it was with a feeling of regret that I found it necessary to leave the genial company of Mr. Coney, whose enthusiasm dissipated the monotony usually attending the cut and dried routine of a reporter's life.

"I'll tell you Fifth Street yards you are coming," said Mr. Coney, as he stepped to a peculiar-looking machine resting on wall brackets between the two big desks in their middle office.

"Pay no attention to a fellow from ROCK PRODUCTS," he wrote with a pencil attached to the machine by two strands of rubber, the pencil being at the apex of a triangle formed by them. By means of a switchboard connecting their various yards they are able to send instantaneously any message of importance, thus overcoming the slight delays usually attending the telephone.

"By this method," said Mr. Coney, "we are able to have any order fully covered at our yards within a minute after it reaches us here. We call this a sender, and it is the only one we use. At the yards we have receivers, but eventually we will install senders, although they are hardly necessary as we use this only to send what orders we receive here to the plant best fitted to handle the material wanted. By the way," continued Mr. Coney, "if you are looking for a method to prevent lime from air-slaking, this machine is the only solution I know of. By this we keep lime moving—and moving fast at that. Say, for instance, we have several cars in our Evanston yards this morning. The Evanston yards will handle all of our orders, and while I will admit the lime

would be slaked to a certain extent, materially its strength is hardly affected. Keep it moving. Get it on the job quick. That is the only alternative."

The automatic machine used by the Moores-Coney Company is called a telautograph and is being placed on the market by the Gay National Telautograph Company, the local telephone wires being used in the transmission of messages. It is practically the same device tried by the New York newspapers several years ago in "wiring" sketches to their art department, inasmuch as the pencil in the hands of the sender causes a pen stationed on the receiver to move as does the pencil, thus transcribing the message. The "inking" of the pen rests with the sender, who allows six words usually to a filling. Both Moores and Coney are "dippy" about their telautograph, as well they may be—just about the same as a three-year-old with a Teddy bear.

The Moores-Coney Company are agents for Atlas, Alpha, Lehigh, Alma and Buckeye Portland cement, also Louisville and Utica Natural. All of the lime handled by them is manufactured at Springfield, Ohio. At present their exhibit rooms, while on the same floor with their offices in the Union Trust Building, are located in another wing, but while they are complete to heart's desire, the necessity of winding around the corridors is not to the liking of these up-to-date young men and it will be no great while until their entire suite will be connected from door to door.

Their exhibit rooms are a treat. Here they have samples of all kinds, shapes and sizes of building material. At the present time they are most enthusiastic over a composition called "Metile." Its ingredients are a secret, they say, but it looked to me about the same as porcelain, except that it adheres only to an ordinary ground of zinc. This they are using not only in corridors and toilet rooms, but wherever wainscoting is necessary. Any design wanted is possible in "Metile," and Mr. Coney goes on record as saying that its cost is less than half of tile and its service equally good. They are also proud of an enamel brick handled by them and placed on the market by the American Enamel and Tile Company of No. 1 Madison Avenue, New York. From the rear window of their exhibit rooms one can look out at two of Cincinnati's skyscrapers whose facing is of this brick, and with the fact that this city has the smoke nuisance well under control you can readily imagine the effect obtained.

The Moores-Coney Company have four plants in operation here, their largest, possibly, being located at 927 Fifth Street, opposite the Cincinnati, Hamilton and Dayton railway station. Here is the depot for their cement and lime. At Fourteenth and Canal is their sand depot. Scribo had the pleasure of watching a boat of sand arriving from Carthage, Ohio, to this point. Three good, strong mules were drawing the barge which floated easily on the stagnated water of Cincinnati's "Rhine." This barge was quickly unloaded and sent on its way to Carthage for another of the same brand. The white sand used by these people is obtained in the lake regions. However, they use very little of it.

On March 1 of this year they opened their new yards at Evanston. Their plant here has a frontage of 550 feet on Lexington Avenue, starting at the corner of Montgomery Pike. Here is their hardware department, where they have a dry house 50 by 60 feet. This is continually heated and is everything modern ingenuity can make it. In a warehouse covering an area 75 by 90 feet and two stories in height they store their plastering material, such as mortar coloring and metal lath, and also their pressed brick, while to the left is another warehouse, 45 by 150, used only for the storage of their reserve stock of cement. The switch running into this yard will accommodate fifteen cars.

Some twenty miles from Cincinnati, at Batavia, Ohio, is located the Moores-Coney blue shale brick plant. Here they have installed two Boyd presses, with a capacity of 5,000 brick daily. The shale used is obtained in the immediate neighborhood and is handled in the shape of what appears to be a hard putty, the raw material resembling soapstone. At this plant are also manufactured the Moores-Coney side dump cars, used by them at all their plants.

The plant is located on the main line of the Norfolk and Western Railroad, and by means of an elevated tramway they are able to load and unload with remarkable rapidity.

When Mr. Coney and I found ourselves again in their offices it was lunch time. Mr. Coney had evidently noted the fact, either by means of the large clock on the wall or through an interior instinct. At any rate he sat up and took notice and a cordial invitation to accompany him came forth. "Mr. Coney," said I easily, "it hurts me to do it, but at last the confession must come. I have accepted your guidance and information readily, yet all the time my conscience was being held down only by my Adam's apple. Mr. Coney, I am the author of that cartoon of you on the stage of the Cincinnati Opera-house—before that magician, you know, that appeared in ROCK PRODUCTS for March."

A peculiar look overspread Coney's facial adornments as he gazed at me. I noted hurriedly that I was closer to the door than he, but about that moment the said door was illuminated by a tall and august figure, Coney arose, and I thought all that was coming to me would soon be delivered.

"Moores, you are responsible for that," yelled Coney.

"What?" asked Moores, for it was he who had entered.

"That cartoon in ROCK PRODUCTS!" fairly screamed Coney.

Moores immediately proceeded to double up, and after his appetite for laughter had been sufficiently satiated we hiked to a well appointed beannery, wherein we did justice to nearly everything on tap, both wet and dry.

## The Contractors' and Builders Supply Company.

It was early in the morning when I reached the Hunt Street yards of the Contractors' and Builders Supply Company. Edward Tully, their superintendent, had not shown up, but as things were commencing to open up and because this plant is the eastern border line of Cincinnati's recent \$750,000 fire, I concluded to hang around a while. For so doing I received a jar almost as great as the one felt by the principal actor in the little stunt I had the honor to witness. I was watching a half dozen wreckers standing on a skeleton wall seven stories in height, when one of them pitched forward and started on his way down. He hit. He did not move for a second and I had already concluded I wouldn't work that day, when he stretched himself and we rushed to him.

"That wuz bum mortar in them bricks," he said when we reached him. "Git me a drink." In less than five minutes he was ready and willing to go back on the job.

I learned soon after that Mr. Tully was at their Stanton Avenue yards; so after taking a good look around and noting that they were well supplied and reasonably busy, with at least five teams in operation, I jumped on the car for Walnut Hills. Here I found their main yard, but to my sorrow Mr. Tully was nowhere to be seen, having been compelled to rush away to one of the jobs they have on hand. However, Mr. Ervin, the treasurer, was present, and he cordially showed me over the works.

Things were certainly buzzing, many of the wagons having already gone, with a few back for their second load. The warehouses are packed with lime, white and pit sand, cement, sewer pipe, fire and pressed brick, fire clay, etc.

The yard is nearly square, being surrounded by the warehouses and stables, and is large enough to accommodate a dozen teams without the slightest trouble. Mr. Ervin said the season had been an exceedingly good one and naturally they were well pleased with the world in general. They are the



Scribo in Cincinnati.  
"Here's to you!"



Spectacular stunt at the  
C. & B. Supply Co.



Seeking admission at the  
Moores-Coney Co.





At the Cincinnati Sewer Pipe Co.

agents for the Saylor Portland cement, handling the Nazareth also.

#### L. H. McCammon & Bros.

L. H. McCammon & Bros.' plant is located at Harrison and Western Avenues and is one of the best stocked I have seen in this city, a large supply of building materials being kept ready for immediate use constantly. Running into their yard in the rear are three switches, leading directly to the main tracks of the Baltimore and Ohio and Big Four railroads, and at the time of my visit they were covered with cars ready to be unloaded.

McCammon & Bros. are heavy dealers in building supplies, and while nothing exceptionally startling was going on I found evidence all around that

something had been happening in the busy line and no one seemed to doubt that this condition would prevail again, and shortly at that.

I met John Casey, the superintendent, and had a talk with him. We walked through the warehouse, where I noted they kept a good supply of Whitehall Portland cement in stock, also a big lot of Old Dominion. Their fire clay, a large bin of which is located in the rear, seemed of exceptionally fine quality, and I learned it was obtained from Nelsonville, Ohio. Directly across the wagon way is their white sand bin, and its contents were about as clean and sound as I have yet found. Many sacks and barrels of J. B. Speed's Blue River and the Ohio and Western Company's lime were stacked together in the center of the warehouse, while opposite was stored a big supply of sewer pipe, embracing all shapes and sizes, together with all the different fittings now being brought into play. McCammon Brothers also deal largely in pressed brick. They have handsome offices at 312 Johnston Building, in the heart of the city.

#### The W. H. Settle Company.

G. L. Wright, general manager of the W. H. Settle Company, is as good an old optimist as you would want to find in this old world. "Busy! Busy! Busy!" is about all he could find to say, and from his actions he looked an odds-on favorite in that role. I had the pleasure of meeting him at the company's plant on the Norfolk and Western Railroad, near Madison Road, where they have their offices and yard. With their warehouses well supplied and their teams moving and creaking, and with the constant yelling of the drivers and handlers as the material was being sent on its way to the various jobs, the place had an appearance of activity. Mr. Wright found time, however, to open up with the information that they were agents for the Grant brand of Portland cement and that they were so busy pushing that product they did not have time to handle any other. "Except," he added, "the Phoenix, Buckhorn and Nazareth." He smiled as he said this, the same sort of a smile you like to meet on a dull, cold, drizzling day. I needed it and I got it, and he made me like it to such an extent that I got that busy feeling myself. The atmosphere certainly teemed with it as Wright continued, and it would have been hard even for the fellow with the best hard luck story on record to have sidestepped its influence.

The W. H. Settle people have a large supply in paper sacks of "Cream of Lime," which they obtain from Genoa, Ohio. They also have a good supply of hydrated lime from the Ohio Western Lime Company, and altogether handle about 5,000 barrels a year.

"I know of no preventive for the air-slaking of lime. All that I know is that it air-slakes all right, all right," said Mr. Wright. "I wish I did know," he added, and I left him as the smile for the first time left his face.

#### The Cincinnati Sewer Pipe Company.

At Elm and Water Streets, extending from Elm Street to Plum Street, and from Water Street to the river, is located the big plant of the Cincinnati Sewer Pipe Company. Their yards and warehouses are fully stocked with a supply of building material that looks able to keep them going in any time of need, such as those usually experienced during the flood seasons and in times of poor shipments. This plant—they have a smaller one at Evanston—consists of four large warehouses ranging in height from two to three stories and covering an area equal to

half the size of an ordinary city block. Here they store their white sand, lime and cement, the capacity of their cement warehouse alone, which is strong and substantial and three stories in height, being 400 barrels to the floor. To the left of this and at the corner of Elm Street are their general offices, while to the right is their two-story warehouse, used for the storage of lime and white sand. Here I was especially delighted with the white sand used by them and which they obtain from the bed of the Fox River in Northern Indiana. It was as dry as one would hope to find, and is carefully handled to retain that condition. Its strength could be easily felt, and I could readily agree with William Nickel, secretary and treasurer of the concern, who showed me around, that he obtained exceedingly good results in its use.

Running between the cement and sand warehouse is a twelve-foot wagon way leading back to the stables in the rear, and also to the yard, where a double-track switch, capable of holding at least twenty cars, runs in from the main track of the railroad. Directly across the tracks are located the sheds under which is stacked sewer pipe in all its various shapes and sizes, and in which they deal extensively. All of the lime used by them comes from Springfield, Ohio, and Mr. Nickel told me that the demand for air-slaked lime from his point of view was becoming greater right along. "We have absolutely no use for it ourselves," he said, "but there seems to be no great difficulty in getting it off our hands. We get good prices for it, but at that can hardly afford to handle it, as our supply barely enables us to keep going the jobs requiring the good, strong stuff. Our lime is delivered so quickly that we overcome air-slaking to a great extent. However, I do not mean to say we do not receive lime already air-slaked, and sometimes we are compelled to allow it to slake on our hands. We have no method and know of none to prevent this condition."

I was very much surprised at this point to learn from Mr. Nickel that while he had heard of Rock Products he had never seen the paper. Fortunately I had a copy with me, which I immediately handed him. He studied it carefully for several minutes and, without other words than "I need that," he hurried over to the strong box and immediately subscribed.

Mr. Nickel said that the Cincinnati Sewer Pipe Company were agents for the Crescent brand of Portland cement and handled it exclusively.

#### The J. E. McCracken Plant.

The late afternoon found me in the office of J. E. McCracken's plant at 631 Front Street, overlooking the river and directly under the Chesapeake and Ohio bridge.

With the assistance of Mr. McCracken's stenographer, a most pleasing young woman, Scribo was able to get him into print, and the result was most interesting. Mr. McCracken, who is a most companionable fellow after you get him started, took me over his yards. In speaking of methods of preventing lime from air-slaking he smiled and went on to tell me that he was using all the air-slaked lime he could find. "By a method, or rather a composition, I use I am able to make a paste, or, as one might call it, a paint, the principal ingredient being air-slaked lime. With this composition we paint all iron work that comes our way. It positively prevents corroding, and as a fireproof material it is as good as asbestos when used of a proper thickness."

Mr. McCracken has a storehouse for the use of slaked lime only, and as I tested some of it I found it more like flour than lime. Mr. McCracken refused to give the other ingredients for his paste, but it is safe to say that gypsum, cement and white sand from the lake regions play a great part.

Mr. McCracken is one of the oldest building supply dealers in Cincinnati, having been in business here for over thirty years, and his plant can be well rated as one of the best in the country. My attention was called to his stables, where twelve head of horses owned by him are housed nightly. Here the best sanitary conditions prevail, and it is with pride that Mr. McCracken gazes in this direction.



The high-water mark at McCracken's.

The floods of last January and March caused Mr. McCracken considerable loss, but notwithstanding this drawback he has been prompt on all his deliveries. Besides handling Pennsylvania Portland cement and Louisville Natural, Mr. McCracken is an extensive dealer in firebrick and sewer pipe. His plant is located on a spur of the Baltimore and Ohio Railroad and a switch with a capacity of eight cars enters his yards. Across the tracks Mr. McCracken has stored ninety-five carloads of sewer pipe recently received. For these he has already obtained a market, and he will be able to store another shipment within the week.

#### The Hyde Park Supply Company.

At the plant of the Hyde Park Supply Company, located at Madison Road and the Norfolk and Western railroad crossing, I had the pleasure of meeting E. P. Metcalfe, their enterprising manager.

Mr. Metcalfe seemed proud, as he well might be, of the teams going and coming as we stood in the yard talking. They have been keeping twelve teams going daily for some time past. Their location, directly at the tracks of the railroad, enables them to receive their material with little or no delay, and according to Mr. Metcalfe they hardly keep it in the yard longer than necessary to unload the cars. "While our twelve teams," he said, "are used to their full capacity daily, we are frequently compelled to hire outside teams to fill the orders we now have on hand. This is the method we have for keeping lime from air-slaking and the one I had in mind when I told you to 'keep it moving.'"

The Hyde Park Supply Company are agents for Nazareth, Phoenix and Buckeye Portland cement and handle large quantities of these brands yearly. At Newtown, Ohio, they have a large brick plant and pitsand and gravel beds.

#### They Didn't Want to Get into the Paper.

H. J. Conkling is still doing business at his old stand on Gilbert Avenue, near Court, and is busy boosting the Vulcanite brand of cement. On my arrival at his yards I stood face to face with Mr. Miller, Conkling's young bookkeeper, who was seated before a Remington typewriter of the latest model. At first I could not understand his reticent manner, but after the arrival of Mr. Conkling, who had been delayed by a new cook at his home during the noon hour, I got wise. The sketch I am sending with this tells the story far better than words. The last I saw of Conkling and Miller was as they disappeared in the direction of Eden Park, making a short cut through the recently burned district which adjoins their plant.

It was from an employee in the yards that I learned Mr. Conkling was "gun-shy" on "getting in the papers," and it struck me rather forcibly that Mr. Miller had succeeded in absorbing a large amount of the boss's feeling, inasmuch as he was leading nearly all the way in the mad race for safety.

I observed that Conkling has a large yard, and from the number of teams backed up and the deep ruts and fresh wheel tracks on his driveway I feel safe in saying he is busy.

Some day, when I have more time, and also plenty of life insurance, I am going back to Conkling's with the intention only of convincing him that all reporters are not yeggmen and that while romance enters largely into the lives of most newspaper men, it is not necessary to regard them as "men with a past."

These last few weeks I have covered quite a stretch of territory. Before visiting Cincinnati I met many busy material men in a number of the smaller towns around St. Louis. And this reminds me. In one of these bustling burghs I saw what I believed to be a unique specimen of the feline tribe—a ring-tailed Thomas cat—head and body all white, but tail beautifully striped with tawny rings. "Surely," thought I, "that is the only cat in the world decorated just like that." But, lo! leaving Conkling's plant I saw by the wayside another specimen just like it. Now I wonder just how many more white cats with ringed tails there are in the world. I will give a prize for every authenticated specimen reported to ROCK PRODUCTS—one whole year's subscription for every white ringtailed cat.



The foot race at Conkling's.

## SOME MISSOURI RETAILERS.

They Show Scribo that the Prairie State is Right in the Van of Business Progress.

### ST. CHARLES, MO.

A mere enumeration of the merchandise in which Ringe, Barklage & Co. deal will serve to indicate very plainly that builders and farmers in their section need not go outside of St. Charles for supplies, viz.: Hardware, tools, stoves, tinware, sewer pipe, cement, lime, farm implements, machinery, pumps and vehicles. In my visit to their premises, which comprise a spacious store, basement and warehouse, L. J. Ringe, who, though not a young man, yet is the junior of the firm, told me that they handled Lehigh cement, Glencoe lime and Glencoe plaster, and Blackmer & Post's sewer pipe. Mr. Ringe informed me that they had recently closed a contract for sewer pipe for the city sewer system, which will require from 100 to 110 carloads, and this big order has been placed with Blackmer & Post. They also have a contract to furnish cement for concrete walks for the courthouse, which will require over 1,200 sacks. The demand for cement has been so good this season that they have handled over twenty carloads.

Robert W. Schmoldt, who is the successor to the large lumber and building materials business of the Dubach Lumber Company yards at Second and Monroe Streets, informed me he handled Universal cement, Hannibal white lime, Glencoe black lime and Acme plaster and finish. The Rock Products man discoursed so convincingly on the merits of hydrated lime that Mr. Schmoldt said he would order some put into the next car of common lime which he had shipped from Hannibal.

When I met Mr. Bruns of the Bruns Machinery Company I told him if I didn't know to the contrary I might imagine I was still in St. Louis, for when I looked around the large and well-stocked store I found everything in the hardware, farm implement and machinery line. Besides this they carry in stock, in other warehouses, a full line of builders' materials, including Atlas cement, Bear Creek (Hannibal) white lime and Acme cement plaster, and Laclede-Christy sewer pipe. Mr. Bruns informed me that the Southern Illinois Construction Company, who have the contract to build an addition to the old and well-known Linderwood College, to cost over \$40,000, had arranged to get their supplies from his company.

Hackmann & Middendorf are prominent lumber dealers here. Mr. Hackmann informed me they were not now dealing in masons' supplies, and the only thing in that line which they carried in stock was Agatite plaster.

### KIRKWOOD, MO.

G. De Hoog has been in the builders' materials and coal business here for twenty-three years. He handles Lehigh cement principally, Glencoe black lime and St. Genevieve white lime, Acme cement plaster and Evans & Howard and Laclede-Christy sewer pipe and tiling. Mr. De Hoog was quite interested in hydrated lime, and not having as yet dealt in it plied the Rock Products man with questions. Mr. De Hoog has been a subscriber for Rock Products almost from its initial number and values it highly. There is to be a big planing mill built and a large school house is approaching completion. Owing, however, to the rainy, backward weather in the spring building has not been as active this year as it was in 1906. Mr. De Hoog's son is associated with him in business.

Theodore Pundmann, at 400 South Main Street, is a general contractor and also deals in coal, wood, sand, gravel and Glencoe lime. Mr. Pundmann is a young man and a hustler.

### GLENCOE, MO.

Near the little village of Glencoe, Mo., which is on the banks of the Merramec River, about twenty-seven miles west of St. Louis, are located the nine quarries of the Glencoe Lime and Cement Company, C. W. S. Cobb, president. The Missouri Pacific train landed the Rock Products man at the Glencoe station and a pair of good mules conveyed me to the kilns of the company, where Colonel Cobb took me in charge for a visit to the quarries. There the services of the mule team came again into play. Leaving the

road after awhile we began to climb the foothills which are a part of the Ozark range. The reader will note the use of the word "climb," and this feature of the ride has a practical bearing, since the fact that the quarries average a hundred feet above the kiln plant admits of delivering the stone to the kilns over the four miles of railroad belonging to the company by gravity, the empty cars being hauled back to the quarries by mules.

In quarry No. 1 I noted the fine quality of the stone, which Colonel Cobb assured me was equal to the best in the country for making cool working lime, being high in carbonate and having no magnesia.

The company own the land on both sides of their track and seemingly might furnish lime right along for a hundred years to come. Although operating the quarries for over thirty years, which also is the period of Colonel Cobb's connection with the business, the company have made but little inroad into their apparently inexhaustible supply, though, incidentally, they have, by quarrying in different localities, ascertained the extent of their resources. The quality of the stone is such that a fine grade of cement has been made from it. Another feature of the company's property is that there is no expense for stripping, and yet, though the stone is covered by a very thin layer of earth, all the hills are thickly wooded, with little evidence of nourishment from the soil, thus furnishing an ample supply of firewood for firing the coal used in the burning of lime.

Drilling for blasting is done by compressed air with Ingersoll-Rand drills. The gasoline engine and compressor are from the Fairbanks-Brown Company. From one to fifty kegs of dynamite are used in a shot, and N. E. McLoon, the superintendent, took good care that we should not come to an untimely end during the blasting, which took place at the noon hour.

Seeing several loaded cars of extra quality stone I was informed this lot was to go to the iron foundries for fluxing. Colonel Cobb, in speaking of the uses of lime, mentioned that the city of St. Louis had placed a long-time contract for lime with his company for large supplies for the water settling process so successfully employed for the past three years.

On our way to the kilns, of which the company has several, known as the Eldred process, my attention was drawn to a unique plan for the storage of gasoline. There were two tanks of galvanized iron, and on climbing to the top of one of them I found that there was an inner tank, also of galvanized iron, which stood on even legs, and the space between, as well as the bottom or foundation, was being filled with a mixture of Lehigh cement and sand and tamped down. This plan and the material are the work of the O. K. Harrey Steel Works of St. Louis. The dimensions were as follows: Outside casing diameter, 8' 6"; height, 10'. Inside casing, diameter, 7' 10"; height, 9' 9". Capacity, 3,600 gallons each. The tanks are close to the track and gasoline can be readily pumped into them from the tank cars.

### A Prosperous Minnesota Firm.

MANKATO, MINN., Sept. 19.—Fowler & Pay, who were established here in 1887, are enjoying a prosperous and growing trade, their headquarters being located here and maintaining also a large warehouse at Minnesota Transfer, Minn., a fine plaster mill at Fort Dodge, Iowa, and extensive cement works at Austin, Minn. The home office is at the corner of Broad and Lime streets, Mankato, as are also the lime kilns, brick yards, stone quarries and crushers. The firm is composed of Frank Fowler and P. Frank Day, both representative American business men. They employ about one hundred men in Mankato alone, and their operations extend far beyond the limits of the State.

## ILLINOIS SUPPLY DEALERS.

More of the Prairie State's Prosperous Towns Visited by Scribo. Business Active Everywhere.

### EDWARDSVILLE, ILL.

The trade of Edwardsville in lumber and building materials, so far as the Rock Products man could learn, is confined to three long established concerns. The first one I called upon was that of Edward Barnett. Mr. Barnett did not happen to be in, but I learned from his superintendent, T. G. Koch, that they handled Lehigh Portland cement, St. Genevieve white lime and Eagle, Peerless and Agatite plaster.

The Stolze Lumber and Manufacturing Company has been doing business for thirty-three years, having been established by the grandfather of young Albert E. Stolze, who is now the managing man. Mr. Stolze stated they handled Western Cement Company's Speed brand, Marble Head common and hydrated lime, Monarch plaster and East Alton Stoneware Company's flue lining. Mr. Stolze is quite pleased with the results of a trial order for Marble Head Company's hydrated lime, as it rids him of the trouble of breaking bulk to accommodate customers for small lots, and he also finds it keeps in excellent condition in the warehouse.

Lumber dealers must be good material out of which to make city officials and Edwardsville is fortunate in having Mr. Hotz for its chief executive. The Hotz Lumber Company was established in 1883. In the building material line they handle Atlas Portland cement, St. Genevieve white lime and Roman Nose (Oklahoma) plaster.

### EAST ALTON, ILL.

Andrews & Crandal have at East Alton a large lumber yard and also deal in builders' materials. In talking with Mr. Crandal Jr., I learned that the senior Mr. Crandal leaves the management of the business with him, and that the yard at East Alton is but one of ten in different sections of Illinois in which the company is interested, among which is Stinson & Hand, Riverdale and South Chicago. They handle Universal Portland cement, Hannibal white lime and Agatite and Acme plaster.

It usually happens that manufacturing plants are situated at considerable distances from the city proper, generally owing to the necessity of being near the source of the raw material, and frequently there is no access by means of street cars, the proprietors using a private conveyance. The shortest route to such manufacturing plants is usually via the railroad track, for they are apt to be provided with switch or spur tracks. The frequency with which the Rock Products man has met with viaducts and bridges on such trips brings to mind the awkward predicament which would arise if forced to dispute the right of way with a train when half way over. These reflections were again in order on the occasion of a visit to the factory of the Stoneware Pipe Company at East Alton. This company I found, when conferring with J. W. Koch, president and treasurer, has been established over thirty years and its products of salt glazed and vitrified sewer pipe, culvert pipe, drain tile and wall coping, together with flue lining and chimney pipe and tops, have been shipped all over the country. The factory buildings and storage yard cover altogether about thirty-five acres. Besides this, the company owns about 140 acres of land and has a spur track connecting the plant with the Big Four railroad. At the Louisiana Purchase Exposition the grand prize official award ribbon was bestowed on the company's exhibit and a silver medal was also awarded for the excellence of their clay products.



PLANT OF THE W. H. HILL LIME AND CEMENT COMPANY, EAST ST. LOUIS, ILL.



## ALTON, ILL.

The leading concern at Alton, Ill., in builders' supplies, is the Alton Builders' Supply Company, Second and State Streets, of which E. J. Lockyer is manager. The concern also does a big business in hardware. Talking with Mr. Lockyer I learned that the concern handles Atlas Portland cement, Agatite cement plaster, Hannibal Empire lime and Pennsylvania and East Alton sewer pipe, tiling, etc. Mr. Lockyer reports business quite good—in fact, he was so busy that the ROCK PRODUCTS man had some difficulty in holding him down for an interview.

J. B. Miller, whose place of business is on the corner of State and Second Streets, and warehouse at 306 West Second Street, told the ROCK PRODUCTS man that for cement he handled Atlas principally; in lime, Alton and Hannibal; in plaster, Agatite and Acme; for sewer pipe, tiling, etc., East Alton Stone-ware Company's product.

## EAST ST. LOUIS, ILL.

The W. H. Hill Lime and Cement Company a few years since built a large warehouse, office and stables on their lot at Sixth Street and Broadway. This, with ample yard room, gives the company splendid facilities for handling all kinds of building materials, especially as the switch tracks of the Southern railway run for 700 feet in the rear of the warehouse and so close as to admit of the use of trucks.

In the course of a chat with H. M. Hill, secretary and treasurer, the ROCK PRODUCTS man found that business was in very satisfactory shape with the company. The business was established thirty-five years ago and for this reason the company is well known in East St. Louis and vicinity. While they handle several brands of cement they sell mostly Bedford, Indiana and Lehigh. Of late they have found the paper bag package to meet with favor and most of their stock is put up in that way. Black lime they handle in bulk, but sell white lime in barrels. Their trade in white lime is mostly in St. Genevieve. A large stock of all kinds of sewer pipe, tiling and other similar material is carried in stock and the various kinds of sand.

P. Flannery & Son, whose warehouse and office is on the Terminal Belt near State Street, carry in stock lime, cement, hard plaster, plastering hair, plaster of paris, white lime, mortar color, red brick, chic brick, sewer pipe, wall coping, flue lining, granite, gravel and macadam. For cement they handle mainly Atlas, Red Ring and Wabash; in plaster, Plymouth and Royal; also St. Genevieve white lime. In talking with young Mr. Flannery I learned that he had an idea their concern had secured this year the bulk of the plastering trade. For the Siking Building alone 10,000 yards were used. They are selling more dark plaster this year than last. Mr. Flannery stated that a large federal building is about to be erected on Missouri Avenue, between Seventh and Eighth Streets, about 300 by 240 feet. The land for the building has been purchased at a cost of \$60,000 and work will be begun within six months. An opera house has been remodeled and another is being built. The Church of the Sacred Heart, the foundation of which cost \$5,000, and total cost of \$35,000 to \$40,000, is a job for which the firm is furnishing material. The city is planning to construct a sewer, to cost \$1,000,000, a job, Mr. Flannery said, which is meeting with general approval. The Flannery & Son concern has been established ten years. It began with one team and now ten teams are hardly sufficient to handle their business. Mr. Flannery said whenever a cement salesman put in an appearance he was pretty certain to ask to look at his copy of ROCK PRODUCTS.

The retail dealers of Southern Illinois evidently find it to their advantage that a large concern, such as the Builders' Supply and Coal Company of East St. Louis, carries in stock a large supply of all kinds of building material, since the ROCK PRODUCTS man in talking with Harold Bebrans, the secretary and manager, learned that the company is shipping to between one and two hundred of them. The feature of this trade is mixed carlots, which enables the customers of the company to keep up their assortment by obtaining supplies readily and promptly. The warehouses and yard of the company are situated on the Terminal Belt Railway, saving hauling expense. Besides other brands they sell large quantities (mostly in burlaps) of Universal Cement, Red Ring Black Diamond, Glenwood black and St. Genevieve white lime. Their trade in plaster is heavy, and they ship to Kentucky, Indiana and even as far east as Ohio. The fact that they annually handle over 10,000 tons indicates that the American Cement Plaster Company's plaster is popular with their trade.

The Interstate Contracting and Supply Company handles Kosmos Portland cement, plaster of paris and white lime, sand and macadam. E. C. Gruetzemacher

is vice-president and general manager. Railroad service is conveniently near at hand, the plant being located on the tracks of the Southern Railway.

## Sand and Gravel.

## Missouri River Sand.

BOONVILLE, Mo., Sept. 17.—Charles Meierhoffer is engaged here in the sale of Missouri River channel sand, coal and cement. Going to his sand plant on the river, where he has a steam power derrick and shovel, the ROCK PRODUCTS man boarded the steam sand-pumping boat and found he was using a sand pump from the Morris Machine Works, Baldwinville, N. Y. The engine is from the Moses P. Johnson Machinery Company, St. Louis. The plant is situated near the tracks of the river division of the Northern Pacific. Mr. Meierhoffer deals in the Atlas brand of cement.

Mr. Meierhoffer has for several years been engaged in shipping Missouri River channel sand. An objection at first raised against this sand lay in the black particles, which on the surface of cement work, whether of sidewalks or blocks, raised blisters and left pitmarks, defacing the job. Mr. Meierhoffer, after spending much time and money in exploring the territory from which the river brought the sand, found that the black particles came from the lava beds of the Yosemite Valley, and that in the center or heart of each particle was a deposit of salt, varying in proportion to the size of the lava. Having learned this, the next proposition to consider was the best method of eliminating the lava (or lignite). After some experimenting he found that a 14-mesh eliminated the lava of objectionable size which might cause trouble on the surface of the job, and there was really no waste, as the coarser sand remaining, containing the lava, could be used for the base of the work.

## Pumping Sand at Alton.

ALTON, ILL., Sept. 18.—The Darling Sand Company are getting a fine supply of building sand from the river for local and shipping trade. Their steam pumps are installed on a barge which is propelled to a sandbar northeast of the city. This bar is about fifteen feet below the surface of the Mississippi. Such is the power of the pumps that they are able to fill a scow in forty-five minutes. The scows when filled are towed to the river bank, where a floating steam-propelled bucket transfers the sand to cars on the tracks of the C. P. & St. L. railroad, only two men being required to be in attendance, one with the engine and the other to look after the loading of the cars.

## A Big Contract.

ATTICA, IND., Sept. 16.—The Indiana Southern Railroad Company has just let to the Indiana Gravel Company the contract to furnish gravel for its road-bed, amounting to between 50,000 and 100,000 yards. The Walsh roads runs between Chicago and Danville, Ill. It is an important road, paralleling the double track of the Chicago & Eastern Indiana. The Indiana Gravel Company has grown wonderfully since it first located near Kickapoo. The untiring efforts of its managers are responsible for their successful results.

## Opportunity.

The study of improved equipments for reclaiming sand, and separating the gravel from the sand by pumping operations, is being developed upon a broader basis, while at the same time the grinding, washing and screening of the sand stone have received more attention and are finding wider markets all the time. There are opportunities in this direction.

## Gravel Industry Booming.

BRIDGEPORT, N. J., Sept. 5.—The gravel industry at Silver Run is being pushed more rapidly than ever and many boatloads of sand are being sent away. They have a new way of preparing it for shipment. It is first screened, as usual, and then the fine red soil which is left is sent to the iron foundries, where it commands a very high price.

## Better than Coal Land.

BAY CITY, MICH., Sept. 2.—Richard and William Haywood, who live three miles out on the Saginaw telephone line road, have about eight acres of sand ridge on their farms. Last year they discovered that after taking two feet of fine sand off the top they had from four to six feet of coarse sand and gravel. They expect to get 5,000 loads of sand and gravel worth \$2.50 a load.

## Sand Companies Organized.

The Zanesville Sand Company, Zanesville, Ohio, has been incorporated with a capital stock of \$10,000 and the following directors: Charles S. Baldwin, A. M. Templeton, Harriet T. Baldwin, J. D. Templeton and Henry R. Bell.

The National Sand and Stone Company, Steubenville, Ohio, has been incorporated by F. W. Worthington and others. Capital, \$10,000.

## Sand Plant Changes Hands.

FORT SMITH, ARK., Sept. 5.—By a deal recently closed, J. A. Simmons, an old railroad man, now assumes control of the Fort Smith sand plant. Mr. Simmons was for twenty years division engineer on the Missouri Pacific and Iron Mountain Railway, and retired only a short time ago from the railroad business.

A force is now at work building an incline from the bank of the river. An electric motor will be installed to hoist the sand. Mr. Simmons is contemplating several improvements over the old plant. In fact, a complete new system will be used in conducting the business. As yet Mr. Simmons has not made public all his plans, but says the plant will soon be one of the best in this section. The company will be known as the Simmons Sand Company.

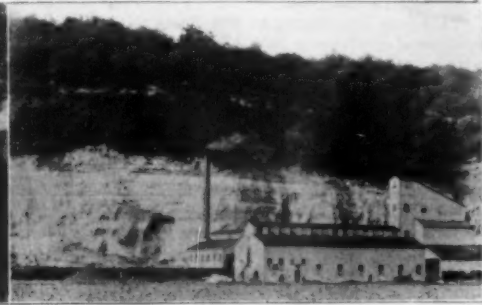
## A Big Missouri Glass Sand Quarry.

PACIFIC, Mo., Sept. 16.—The quarry of the Pacific Glass-Sand Company, the cliffs of which loom up some three hundred feet in height, were visited today by your correspondent, who was surprised to see how much machinery was required for the elaborate process necessary to prepare sand for the use of glass-workers. The rock is quarried by blasting, and a steam drill (Ingersoll-Rand) is also employed. The rock is then crushed in a Williams crusher and carried by conveyors to the mill, where, in the form of sand, it is repeatedly washed, and after the water has been drained off it is dried in a kiln by means of steam and direct heat. When not designed for use in the manufacture of plate glass, but merely for foundry purposes, as moulding sand, it is not subjected to so much manipulation.

In quarrying, both surface and tunnel mining are employed. C. E. Spigelmire, the superintendent, stated that the company's mill was the only washing plant at Pacific. The headquarters of the company are at Pittsburg, Pa.



WHITE SAND QUARRY OF THE PACIFIC GLASS SAND COMPANY.



CRUSHING AND WASHING PLANT AT PACIFIC, MO.



# "KOSMOS"

Kosmos Portland Cement is the product of a model plant, using high grade raw materials and under the direction of a staff of experienced cement engineers.  
It is guaranteed the equal of any American Brand of Portland Cement and will be found to run uniform



in color, strength and fineness. It is suitable for any class of work and is especially recommended where the requirements are exacting.

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**BEST  
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STONE SAWING  
ROOFING  
CEMENT BLOCK FACING  
STUCCO  
WHITE PLASTER

## Washed White Flint Sand

Prices, Samples and Freight Rates furnished on application. Write us.

## United States Silica Co.

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Works: Ottawa, Ill.

CHICAGO, ILLS.

**ARE YOU INTERESTED IN  
CEMENT WATER-PROOFING?**

**MAUMEE WATER-PROOFING COMPOUND**  
is made in a dry powdered form.

Added to cement work, of any character, will make concrete work, cemented walls, cisterns, reservoirs, sewers, conduits, etc., etc. absolutely impervious to water and dampness.

**IS NOT A WASH**

From 1% to 4% to each 100 pounds of cement in different classes of work, will insure dry and waterproof results.

Indispensable for cement blocks.  
Invaluable in the manufacture of cement shingles, tiling, sewer pipes, silos and tanks.

Leaks in old cement work can be effectually closed by the use of our compound.

Try a sack if you would see the best Water-Proofing Compound on the market.

Prices quoted on car, and ton lots, upon application.

Send for full particulars, testimonials, etc.

**THE MAUMEE CHEMICAL COMPANY**

512 St. Clair Building

TOLEDO, OHIO

## The Bates Valve Bag

The strongest and most perfect paper package for shipping and storing cement.

Economical packing and smallest percentage of breakage.

**It is Waterproof.**

## The West Jersey Bag Co.

Front and Elm Sts.,

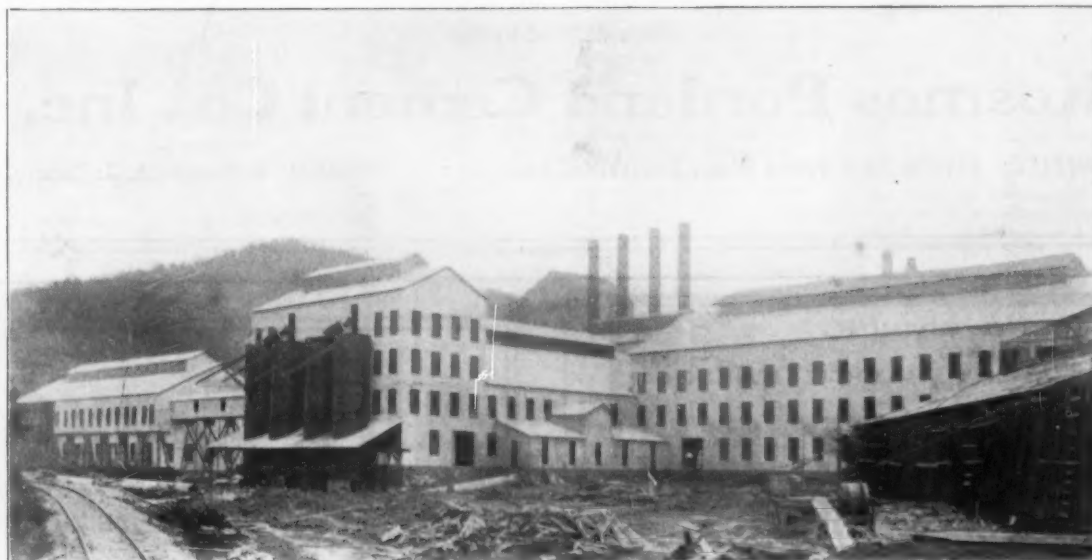
Camden, N. J.

Tell 'em you saw it in ROCK PRODUCTS.

# **"Superior"**

## **High Grade Portland Cement**

**Guaranteed for Uniformity, Strength  
and Durability**



**Manufactured by**

# **The Superior Portland Cement Co.**

**Works:  
Superior, Ohio**

**Sales Office:  
Charleston, W. Va.**

Tell 'em you saw it in ROCK PRODUCTS.



# OBSERVE THE COMPACT STORAGE OF UNIFORM PACKAGES

MADE POSSIBLE ONLY BY THE BATES SYSTEM



The Bates Valve Bag saves storage room and labor at the warehouse end. It means economy and convenience to the dealer as well as the manufacturer. The wise dealer will insist on getting his Cement, Hydrated Lime and Plaster in Bates Valve Bags.

## THE BATES VALVE BAG COMPANY

1411 SCHOFIELD BUILDING

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# A VOLUME IN ITSELF

Raw Materials—The Best. Preliminary Grinding—Most Improved. Clinker—Evenly Burned.

## WHITE



## HALL

**Final Grinding—Absolute Pulverization. Incomparable Finished Product.**

RESULT—A Standard American Brand which meets the most stringent requirements of every character.  
Is additional argument necessary?

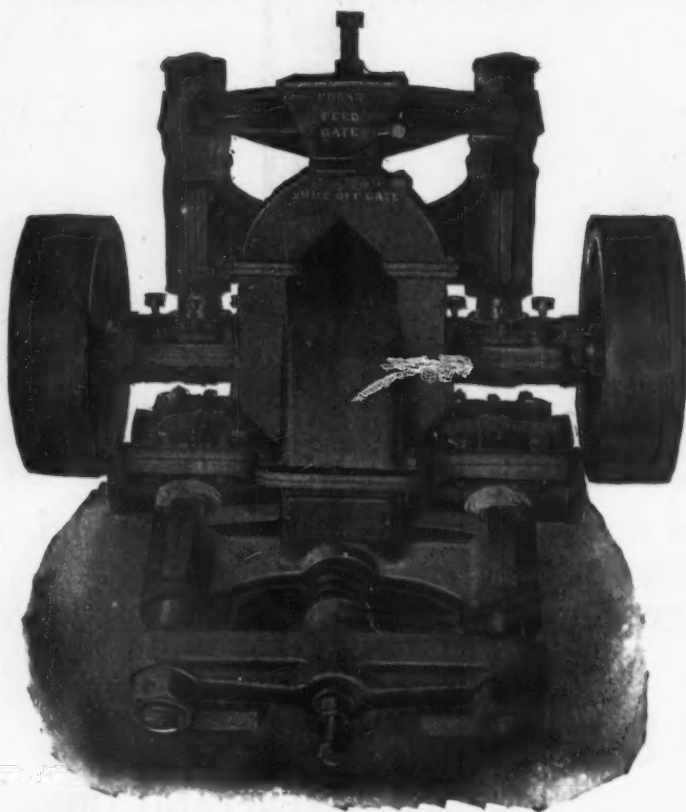
## The Whitehall Portland Cement Co.

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# THE KENT PULVERIZER



**Takes one inch feed. Grinds to any fineness  
from 10 to 200 mesh.**

### GRINDS PER HOUR WITH LESS THAN 25 H. P.

CEMENT CLINKER,	40 bbls.	to 98%	20 Mesh.
CEMENT CLINKER,	12 "	" "	100 "
LIMESTONE,	2½ tons	" "	200 "
LIME,	4 "	" "	100 "
ROSENDALE CEMENT,	43 bbls.	" 90%	50 "
QUARTZ TRAP-ROCK,	4 tons	" "	40 "

**You can easily figure from this what a  
Kent Mill would save for you.**

W. J. BELL, Esq. Supt.  
NEWAYGO PORTLAND CEMENT CO.,  
Newaygo, Mich.

Says:—Four KENT MILLS are driven by one 75 H. P. motor.

For Catalogs and Information, Address

## KENT MILL CO.

170 Broadway,

NEW YORK.

Tell 'em you saw it in ROCK PRODUCTS.



## Concrete Engineering

### Illinois Concern Uses Concrete Power Line Poles.

W. D. Boyce is constructing a power line from Peru to Joliet, Ill., using concrete poles for his transmission wire. The concrete, after being mixed, is laid in a long mold, made of well seasoned boards, thoroughly tamped and allowed to dry. In each pole is placed from 200 to 500 pounds of steel rods, extending from the bottom of the pole to the top and about one-half inch square. There are from eight to ten rods, depending on the size of the poles. The largest are 45 feet in length, 14 inches square at the base and 6 inches at the top. They weigh 7,000 pounds and will support a weight of 3,000 pounds.

This fall it is intended to erect poles only from Marseilles to Morris, and from Marseilles to Ottawa, intermediate stations along the route from Peru to Joliet. The larger-sized poles will only be used to carry the heavy feed wires from the power station at Marseilles to the canal. Along the canal the poles will be 30 feet in height, 9 inches square at the base and 6 inches square at the top. They all taper from the bottom to the top, and present the appearance of a neat obelisk. The smaller poles weigh about 2,000 pounds, and will sustain a load of 500 to 700 pounds, which is greater than will ever be needed upon any of the poles and exceeds that required for any electric road, telegraph or telephone poles.

The poles are now being distributed along the canal and will be erected 150 feet apart, or thirty-five poles to the mile. The cost, as yet, is hard to get at, but it is estimated that it will not exceed \$25 each.

### Livery Stable of Fireproof Construction.

CHESTER, Pa., Sept. 10.—Hugh McCaffery, proprietor of the American House at this place, has just had plans and specifications made by Architect James J. Farnam for a large livery and boarding stable to be erected on Seventh Street. The construction will be of steel, concrete and brick. It will have a frontage of 139 feet, a depth of 78 feet, and be three stories in height. Stalls have been provided for seventy-five head of stock. The opinions of leading horsemen were obtained and strictly adhered to for the future comfort and care of the horses. The building will be well supplied with light and ventilation, the sanitary features are of the best, and the fire protection is of the most modern character. If necessary all the stock and carriages could be gotten out in fifteen minutes. The feed and hay loft are so located that fire will have no chance of doing any damage to the stock or building. The contract will probably be let this week, and the work will be pushed as rapidly as possible.

### A Difficult Contract.

The National Tube Company, Pennsylvania Department, Pittsburg, Pa., has awarded the contract for the construction of an immense retaining wall on the Monongahela River from Lock No. 1 to Bridge No. 22 to the Dravo Contracting Company, Lewis Block, Pittsburg. The wall will be 1,660 feet in length and will contain about 15,000 cubic yards of concrete. The feature of this wall is its being constructed in monoliths, or sections, thirty-three feet in length, and four of these monoliths are constructed in each of the cofferdams that it is necessary to construct. For the construction of these cofferdams interlocking steel piling twenty-four feet in length is used, driven down to bed rock. The contract is one of the most difficult that has ever been attempted in this vicinity and it is made particularly so on account of the fact that all of the material must be handled from the river side of the wall.

### Contractor Enters the Block Business.

SAN BERNARDINO, CAL., Aug. 23.—A. C. Ames, 154 East Fourth Street, is installing modern machinery in his plant for the manufacture of hollow concrete blocks, as well as for general concrete work. Mr. Ames is supervising the erection of a number of cottages and they are renting as fast as they can be completed.

### NORTH PIER OF CHICAGO HARBOR.

*Continued from page 3.*

crushed stone being towed right up alongside the work. Sand is also delivered in barges the same way, and the contractors have provided a derrick boat, equipped with a clamshell bucket, to rapidly handle large quantities of material.

Concrete slush is forced into the molds, firmly tamped and then kept under wet burlap for a period of 10 or 12 days. Each block is inspected and accepted by the Government's engineer before it can be passed on to the work. Forty blocks are made at one casting, or enough for 100 feet of pier foundation. While a new set of blocks are being made in this way, those last completed are placed in their final position by the use of the derrick boat and tug.

The economy of concrete foundation stone of this character is enormous as compared with the quarrying, transporting, cutting and fastening of iron anchorage in natural stone. It is with greatest facility that the materials can be assembled anywhere for making such stone in this artificial manner, contributing both speed and economy to the work. At the same time this artificial material is superior to any natural stone obtainable. Indeed the number of quarries that could furnish at any price a large quantity of stone of such dimensions is limited, and quarries having such stone are practically inaccessible at points where heavy pier construction is most needed. Four hundred and sixty of these foundation blocks are required in the reconstruction of the north pier.

The work was started at the western end of the pier, and 500 feet of the foundation blocks have been placed in their final position. In addition to this, 300 feet have been placed in temporary position to hold down and protect the cribbing, but have not been given their final set.

The work of filling the mass of concrete between the foundation blocks has been divided into sections approximately 25 feet square and 3 feet deep. A shield of heavy burlap is spread over the rubble stone of the cribbing below and between the foundation blocks already set in position. The water of Lake Michigan stands at a level of 7 to 10 inches above the burlap screen. Into these 25-foot sections in turn, beginning at the western end, dry mixed concrete is poured from a mechanical mixer and spread in such a way that the concrete fills all the space of the section as well as the tongues between every pair of the foundation blocks.

The mixer provided by the Great Lakes Dredge and Dock Company is a unique arrangement and can be described as follows: A barge is provided with a platform on rollers and a pivot, so that the platform constitutes a turntable, and upon this platform a framework is provided with a cylinder about 24 inches in diameter and 6 feet long. Hoppers are provided at the elevated end of the cylinder for the purpose of feeding in cement, crushed rock and sand in their proper proportions. Stationary paddles or plows inside of the cylinder accomplish the thorough mixing of the materials as the cylinder with its contents revolves (10 revolutions per minute). From the lower or discharge end of the cylinder the semi-wet concrete mass is delivered by means of a chute directly into the section where the work is in progress. Laborers spread the discharged concrete over the section as fast as it is discharged. The mixer is operated by

power from a steam engine stationary upon the deck of the same barge with the mixer, but separated far enough from the mixer attachments to allow its complete revolution upon the turntable. The enormous capacity of this mixer can better be appreciated when it is explained that each one of the sections mentioned contains approximately 70 cubic yards and such a section is filled with concrete leveled and troweled off in less than one hour—the actual work of the mixer being less than 30 minutes. The mixer is moved from section to section as the work progresses.

William Murphy, superintendent for the Great Lakes Dredge and Dock Company, has his force of hands so well drilled that they handle a section without the least hesitation or loss of time in any way from the moment the mixer begins working until the troweling is completed and wet burlaps spread over the surface to protect the finished work from the rays of the sun.

The side walls of the superstructure are to be built in place, of concrete in mass, resting in the channels of the foundation blocks, and will be built over a form in sections of 25 feet, reaching a total elevation of 8 feet 9 inches, each pair of wall sections to be tied together by 1-inch iron rods, two to each pair of opposite blocks. Opposite sections of side walls will be built simultaneously, and at every 4 feet of length a T-rail reinforcement will be built into the wall horizontally so as to reinforce the concrete crowning roof, which will be built of mass concrete after the sections of side wall have set sufficiently.

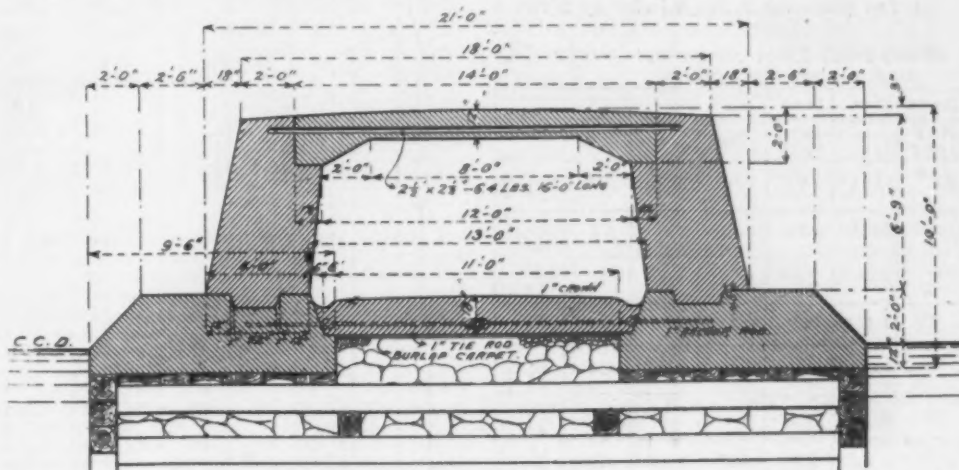
The structural details of this superstructure are fully shown in the accompanying diagram. The completed superstructure will rise about 10 feet above the water line and will provide a passageway out to the eastern end of the pier, where the harbor light will be placed.

The speed with which experienced contractors can perform such operations can be appreciated only by observing the progress of this work from day to day, and the fact that all the materials and every part of the work is under the direct inspection of the Government, which in operations of this kind is monumentally rigid, is another evidence of the extreme adaptability of concrete construction to modern engineering undertakings.

A pier of this same description is now under construction at the harbor of Milwaukee, Wis., and is in the hands of William Gillan, contractor. Several other piers are in contemplation and the amount of work of this very description and of similar specifications yet to be undertaken is enormous. Mr. Liljencrantz, who is in local charge of all the Government's improvements in Chicago harbor and the Calumet River, says that concrete will probably be used for rebuilding the superstructure of all the piers and breakwaters in these waters. The United States Government Engineering Department is fully abreast of the times, and the class of permanent improvements they are now constructing is superior to anything the world has yet seen.

### New \$3,500,000 Hotel for New York.

Warren & Wetmore, architects, have been asked by a group of money men from London, England, to prepare plans for a hotel to be erected at Forty-second Street and Fifth Avenue, twelve stories high, 300 rooms, costing \$3,500,000. It will be operated and owned by Ritz & Carlton of London, on real London lines. It is reported that it will be built of reinforced concrete and faced with fancy brick.



CROSS-SECTION OF CONCRETE SUPERSTRUCTURE.  
SHOWING TIE-RODS BETWEEN OPPOSITE BLOCKS AND T-RAIL REINFORCEMENT OF ROOF.

## REINFORCED CONCRETE TELEPHONE EXCHANGE.

### Full Description and Test Reports of a Fine Example of Modern Construction.

ST. LOUIS, Mo., Aug. 20.—A fine example of modern reinforced concrete construction is the new King's Highway exchange building of the Bell Telephone Company of Missouri, at King's Highway and St. Louis avenue. The plans were made by Mauran, Russell & Garden, architects, and the building was erected under the direction of Henry C. Grote, superintending



NEW TELEPHONE EXCHANGE BUILDING IN ST. LOUIS.

architect, and F. A. Mott, engineer, superintendent of construction of the Bell Telephone Company.

The Selden-Breck Construction Company are the contractors, and the interior marble work was done by the H. Marquardt Marble and Granite Company.

The building is 35x107½ feet, three stories high, and designed to carry one additional story. Therefore, the third story ceiling was designed as a floor and carries a temporary wood roof.

The outside walls are of brick construction, and all the structural work inside is carried on five reinforced concrete columns, spaced 16 feet 4 inches on centers. The section of the columns is an octagon, included in an 18-inch square.

The reinforcement in columns is composed of eight vertical rods ¾ inch in diameter in the first story, ¾ inch in second story and ½ inch in third story, the rods being tied transversely every 6 inches by collars 3-16 inch diameter. There are four ties in each row.

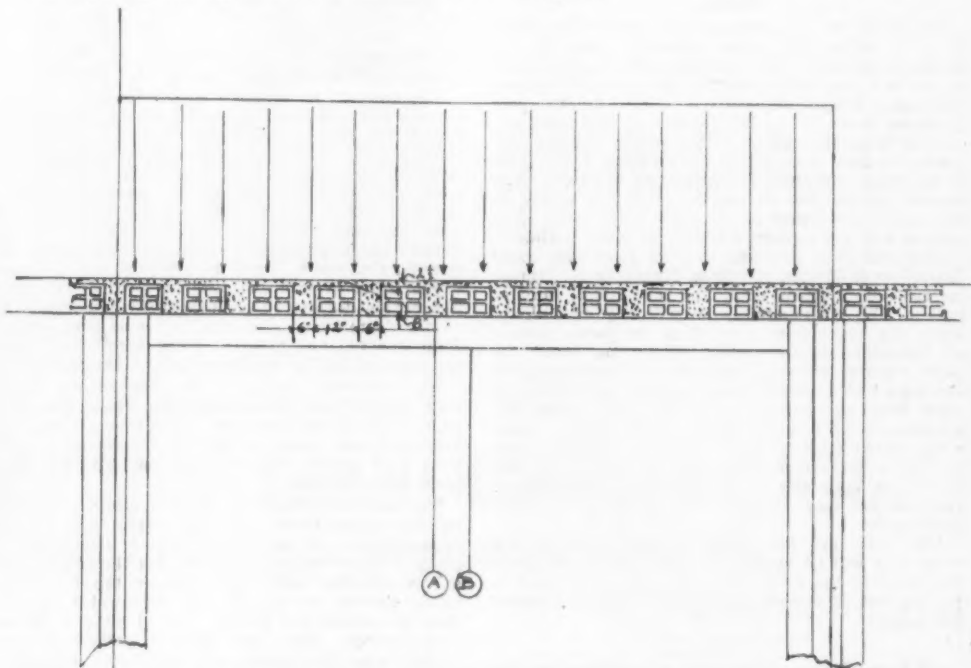
The foot plates are 2 feet 6 inches by 2 feet 6

inches and 6 inches thick, reinforced with eight flats of sufficient strength and width to distribute the load of the column rods on the footing. These footings are 6 feet 6 inches by 6 feet 6 inches and 1 foot 3 inches thick, reinforced in four directions by ¾-inch rods. The girders run longitudinally in the center of the building, and the slabs which rest on these girders and on the outside brick walls, having a span of 16 feet, are formed by 6x8 inch ribs, spaced 18 inches on centers, space between the ribs being filled out with 8x12-inch hollow tiles. A slab 2½ inches thick, reinforced both ways with ¼-inch rods, completes the construction of the floor.

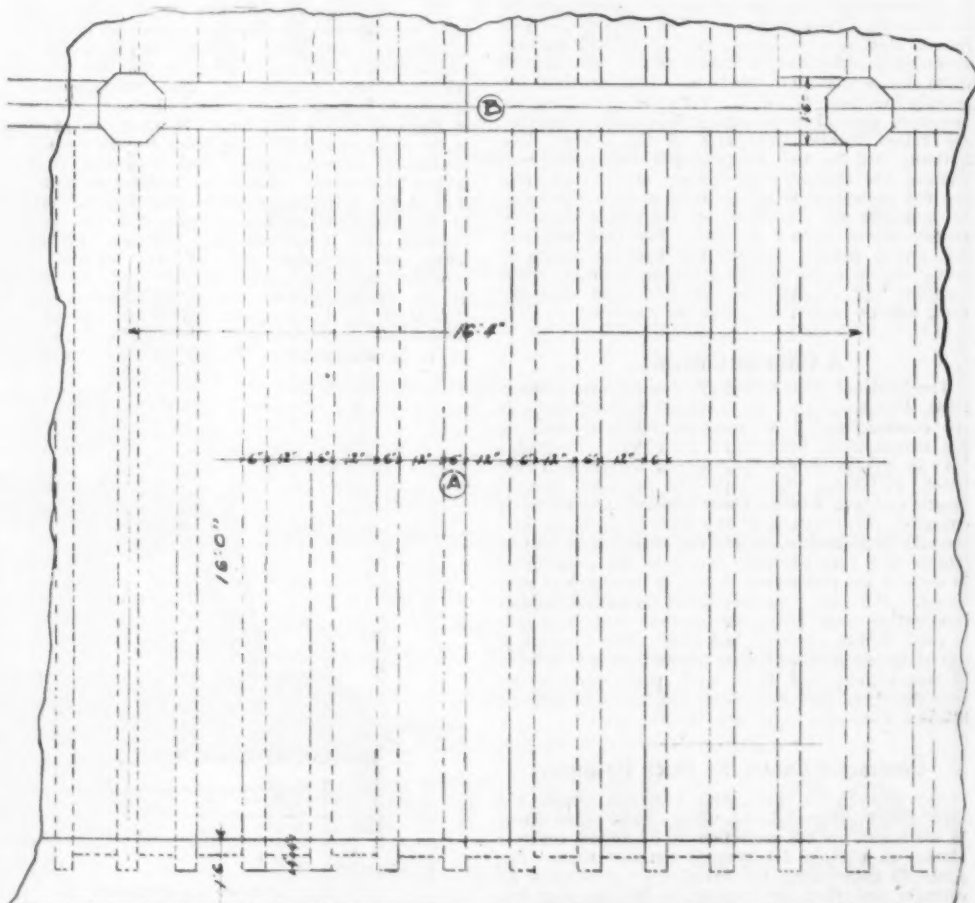
The adjoining test report shows a section and a

plan of the floor panel. The first floor was figured for 150 pounds live load per square foot, and the second floor 200 pounds live load per square foot. Under a test of 300 pounds per square foot over an area of entire panel, the first floor deflected fifteen sixty-fourths of an inch. Under a test of 400 pounds per square foot on a similar area the second floor deflected thirteen and one-quarter sixty-fourths of an inch. The allowable deflection under the architects' specifications was one-forty-second of an inch per lineal foot of span. After the removal of the load the floors came back to their original position.

Universal Portland cement was used exclusively throughout.



END SECTION OF TYPICAL FLOOR SPAN, SHOWING HOLLOW TILE AND CONCRETE STRINGER AND FINISHED TREATMENT (A) RESTING ON SUPPORTING BEAM (B).



TYPICAL FLOOR PLAN, SHOWING SUPPORTING BEAM (B) AND CONCRETE STRINGERS (A) DISPOSED BETWEEN THE COURSES OF HOLLOW TILE.

SECOND PANEL FROM NORTH ON WEST SIDE OF SECOND FLOOR

DATE	TIME	LOAD	Reading of A	Reading of B	Reading of C	Deflection
		LBS PER SQ. FT.	mm	mm	mm	Inches
MAY 1907						
29 <sup>th</sup>	1:30 PM	100	1.10	0.4	0.9	2.5/64
"	1:45 PM	150	1.66	0.6	1.4	3.5/64
"	2:00 PM	200	1.80	0.6	1.5	3.5/64
"	3:00 PM	300	3.70	1.65	2.86	1.29/64
"	3:45 PM	400	6.20	1.70	4.36	11/64
30	8 AM	400	6.45	2.30	5.30	13.26/64
"	11 AM	400	6.60	2.35	5.30	13.26/64
31	5 PM	0	0	0	0	0

RECORD OF TEST OF THE SPAN ILLUSTRATED



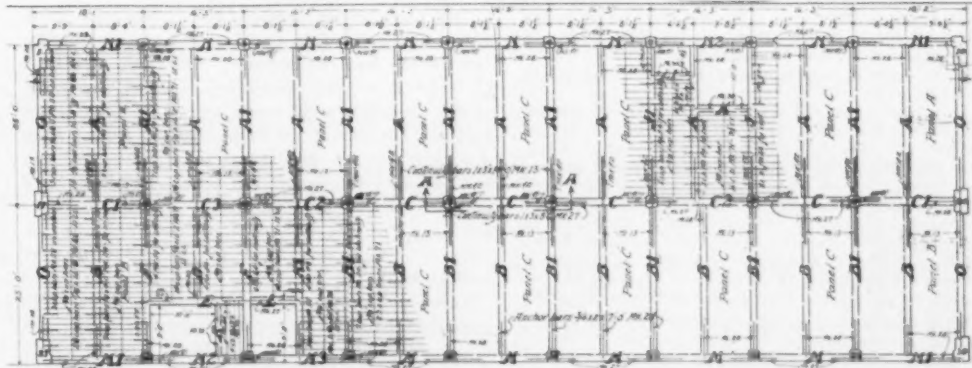
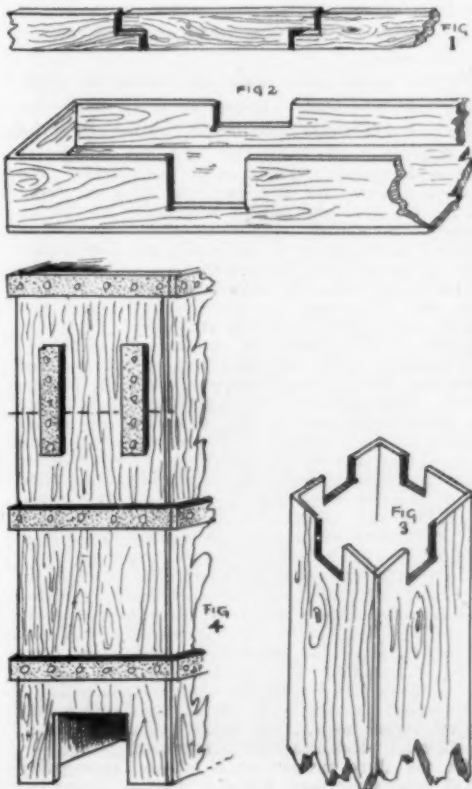
PROGRESS AT ST. LOUIS.

Leading Firm of General Contractors Develop Important Economics—Start of the Chapman Estate Building.

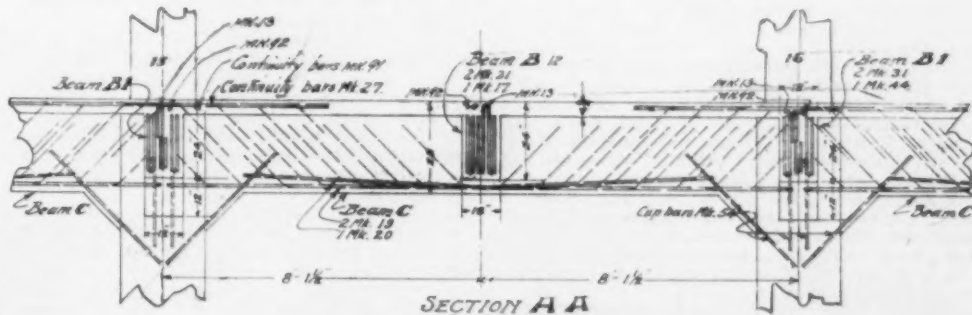
The James Black Masonry and Contracting Company, who recently completed with marked success the Butler Bros.' mercantile building at St. Louis, said to be the largest in the world for the occupancy of one firm, have recently begun the erection of an interesting reinforced concrete building for the J. G. Chapman Estate. Mauran, Russel & Garden are the architects of this building, which is designed for warehouse purposes and is located on the south side of Washington Avenue, east of Fourteenth Street. This building is 50x150 and is to have a basement and eight stories. It is of the skeleton frame type throughout. All exterior columns and beams will be exposed and will have special treatment, excepting the first-story columns and beams on the Washington Avenue front, which will be encased in brick and terra cotta. The building has but one row of interior columns, giving bays of unusual area. The east wall columns and footings have been designed to carry an additional building to be erected at a future date to the east of the present building. The west wall columns and interior columns are carried on spread footings. The accompanying illustration shows a typical floor plan, with the detailed reinforcement. The Kahn system of reinforcement is used throughout this building. The footings, girders and beams are reinforced with the Kahn trussed bar. Columns, floor slabs and retaining walls are reinforced with cup-bars.

The building will front on Washington Avenue and will be eight stories high, or with the basement 120 feet in elevation. The design shows several unusually attractive details. The exposed exterior concrete spandrel beams and columns are to receive special treatment after the forms have been removed. The plain surfaces are to be of satin finished brick and all the ornamental work will consist of artificial stone, known as "alginate," which is cast in effective artificial designs in detail according to the architects' drawings.

The James Black Masonry and Contracting Company is a leading concern in the practice of concrete engineering in St. Louis. They operate as general contractors in this line especially, although their operations are by no means confined to concrete construction, as they own and operate an extensive cut-stone establishment and sublet a very small part of the extensive general contracts which they have already completed and now have under construction.



TYPICAL FLOOR ARCH, SHOWING DISPOSITION OF REINFORCEMENT AND DETAILED CALCULATION.



DETAIL OF THE REINFORCEMENT IN BEAMS.

Concrete Beams				Kahn Bars			
Mark.	No.	Size	No.	Size	Length	Shear	M.
A	8	12x24	2	1/2"	19'-0"	CTD	24 39
A1	6	12x24	1	1/2"	25'-0"	CTD	24 39
B	7	12x24	2	1/2"	19'-0"	CTD	24 39
B1	6	12x24	1	1/2"	25'-0"	CTD	24 39
C	4	14x28	2	1/2"	19'-0"	CTD	24 39
C1	2	14x28	1	1/2"	25'-0"	CTD	24 39
C2	2	14x30	2	1/2"	19'-0"	CTD	24 39
C3	1	14x28	2	1/2"	19'-0"	CTD	24 39
D	1	12x16	2	1/2"	19'-0"	CTD	24 39
E	1	13x24	2	1/2"	19'-0"	CTD	24 39
F	2	14x28	2	1/2"	19'-0"	CTD	24 39
H	1	14x28	2	1/2"	19'-0"	CTD	24 39
H1	1	14x28	2	1/2"	19'-0"	CTD	24 39
J	1	14x28	2	1/2"	19'-0"	CTD	24 39
J1	1	14x28	2	1/2"	19'-0"	CTD	24 39
K	1	13x16	2	1/2"	19'-0"	CTD	24 39
L	1	13x16	2	1/2"	19'-0"	CTD	24 39
L1	1	13x16	2	1/2"	19'-0"	CTD	24 39
M	5	13x32	1	1/2"	19'-0"	CTD	24 39
M1	2	13x32	1	1/2"	19'-0"	CTD	24 39
M2	1	13x32	1	1/2"	19'-0"	CTD	24 39
M3	1	13x32	1	1/2"	19'-0"	CTD	24 39
N	6	14x32	2	1/2"	19'-0"	CTD	24 39
N1	2	14x32	1	1/2"	19'-0"	CTD	24 39
N2	1	14x32	1	1/2"	19'-0"	CTD	24 39
O	4	14x24	2	1/2"	19'-0"	CTD	24 39
R	1	10x16	2	1/2"	19'-0"	CTD	24 39

Concrete Columns				Cup bars			
Mark.	Size	No.	No.	Size	Length		
1-10-11-20-21		6	8	3/4"	12'-0"		
2-3-4-9-12-13							
14-15-16-17	26x26	12	8	1"	12'-0"		
18-19							
5-6-7-8	30x30	4	8	1 1/8"	12'-0"		
22-23	24x24	2	8	1 1/8"	12'-0"		
24-25-26-27	22x22	6	8	7/8"	12'-0"		
28-29							
Material for Cols. below 7th Floor.							
32-2 pipe sleeves	12 1/2"	32	1 1/2"	12'-0"			
112-1 1/2"							
96-1 1/2"							
1616 No. 0 wire.							
Schedule of Cols. supporting 8th Floor.							
Mark.	Size	No.	No.	Size	Length		
1-10-11-20-21		6	8	3/4"	13'-0"		
30							
2-3-4-9-12-13							
14-15-16-17	20x20	14	8	3/4"	13'-0"		
18-19-22-23							
5-6-7-8	24x24	4	8	7/8"	13'-0"		
24-25-26-27	18x18	6	8	3/4"	13'-0"		
28-29							
Material for Cols. below 8th Floor.							
32-2 pipe sleeves	18 1/2"	32	1 1/2"	13'-0"			
96-1 1/2"							
112-1 1/2"							
1360 No. 0 wire.							

A representative of Rock Products recently had the pleasure of a visit with Joseph I. Miller, superintendent of concrete work for this concern. He furnished some particulars of interest in regard to details in connection with concrete construction in up-to-date practice. In one part of the plant they maintain a thoroughly equipped woodworking shop, manned with expert joiners, for the purpose of manufacturing boxes or forms for all of the specified sizes of centering for the columns, beams, girders, and in fact every structural member. A large part of the lumber used for this purpose is 1 1/2 inches thick. It has been found that a very gratifying profit by way of economy can be secured by making the molds in the shop rather than by cooping them up at the building on the usual high labor schedule of wages. It is declared as a fact that the saving amounts to almost 50 per cent,

because the forms so provided are of much better workmanship, more true to the designing engineer's measurements, and they can be handled more rapidly and used over and over again with less effort upon the job, where all the conflicting elements, inconveniences and lack of machinery make it necessary to perform such work by hand at high cost, when better work can be secured cheaper in a well organized and fully equipped woodworking shop.

In the accompanying diagram, Figure 1 shows the approved method for dovetailing the joints of lumber used for centering extensive surfaces, which is a pronounced improvement, because it allows for the shrinkage of the lumber after the wet mass has crystallized and dried. When lumber so prepared is used for centering there are no damaging leaks at the joints between the boards. Figures 2, 3 and 4 show the column and girder forms or boxes assembled. These boxes are firmly bolted together and with the removal of the nuts they fall apart easily without any damage to the material. The column forms are quite versatile in

their applicability; that is to say, the forms which are used for a 16-foot story on the first floor can be readjusted for use in putting up a 12-foot elevation by merely adjusting the steel bolt rods with their respective nuts.

The Butler Brothers' building was reinforced with expanded metal to a great extent, while the Chapman Estate Building on Washington Avenue, now just beginning, will employ the Kahn system throughout, which shows that the James Black Masonry and Contracting Company give no special preference, but carry out their work according to the engineer's designs. In the Chapman Estate building, which is designed for warehouse purposes, provision will be made to support a strain of 500 pounds to the square foot on all of the floor arches.

More than a year ago this contracting firm leased the mill and yards of a very old stone cutting plant, located on Chouteau and Jefferson avenues, and have ever since continued to operate it. George A. Bruce is the mill superintendent. The motto of the company for all of their contracting work is "Construction from the bottom to the top." They are equipped in this branch to get out stone to any desired dimension. The stone working plant has been equipped with steam driven gang saws and much other machinery, including a Curtis compressor and Kotten pneumatic hammers. They also have a Chicago steam traveler of twenty-five tons capacity. The yard is 150 feet wide and 435 feet long and this space is pretty well filled with a stock of Indiana limestone, Georgia marble, Carthage stone and several other popular materials of this class. They are the St. Louis agents for the Norton Blue Stone Company of Bedford, Ind.

On account of the large amount of steel employed in modern heavy construction the company maintains a fully equipped steel working shop in connection with their concrete and stone operations. Every one of the heavy machines in this shop is driven by individual electric motors, including machines for sawing, punching, planing and for turning steel material of all kinds. Electricity is supplied to these motors by the city electric light plant. George R. Schoenthaler is the superintendent in the steel department. He has just returned from Seattle, Wash., and was very enthusiastic over the construction in progress at that important center of the Pacific Coast, where this concern have almost as many building contracts in progress as they have in St. Louis.

#### Repairing an Arch in the Erie Canal.

SYRACUSE, N. Y., Sept. 16.—The accompanying photograph shows the method of repairing the broken arch in the Erie Canal at Syracuse. On July 30 one

of the three arches through which Onondaga Creek passes under the Erie Canal gave way, the foundation having been undermined. This arch was built of stone over sixty years ago. About two-thirds of the top fell into the creek, letting the canal water escape. The size of the break may be judged when it is said that five canal boats fell into the hole and were smashed to pieces. The walls of the old Amos mill and two or three adjoining buildings fell into the hole, and the wall of the canal was also destroyed. Twenty-four thousand yards of earth were washed away.

The first problem was to clean out the arch. The creek was dammed up so that it passed under the other two arches. Big derricks were erected to pull the immense stone out of the break and hundreds of Italians went to work wheeling out dirt. Quicksand was struck and it was found that water from the creek made its way down, undermining the foundation walls and bubbling up where the men were working. Sheet piling and steel "I" beams were driven side by side on both sides of the broken arch until the flow of water was stopped. Then ton after ton of concrete was dumped in to make the foundation, after which the work went ahead rapidly. Water was turned into the canal Tuesday, September 3, but another break north of the present one and of a different character was found, and that is now being repaired.

Upon the arch shown in the picture 800 yards of concrete were used, taking about 1,000 barrels of cement. The formula used for the top was 1 of cement, 2 of sand and 4 of stone. For the bench walls the formula was 1 of cement, 2 of sand and 5 of stone. The opening where the arch fell in was 71 feet long. The concrete on the bottom is 10 feet 6 inches thick; the wall to the spring of the arch is 8 feet 6 inches.

In the photograph Thomas Wheeler, division superintendent of the middle division of the Erie Canal, may be seen sitting in a chair in the Amos mill, the wall of which fell out, and looking down upon the men at work. Directly under him is part of the arch completed, while the iron work is being put in the rest of the arch to receive the concrete which is being wheeled in. Two mixers are used, one at the platform in the rear and the other not shown in the picture. The Italians in the foreground are wheeling material for the concrete to the mixer which is not shown. The stone of the arch at the opposite end from the Amos mill was intact and was not disturbed. Work was carried on day and night, Welles lights and electric lights being used at night to illuminate.

#### CONCRETE GRAIN ELEVATORS.

##### Two Typical Examples of the Adaptability of Reinforced Concrete Construction for Elevators and Milling Plants.

On the following page is shown a good example of the application of reinforced concrete in the building of small fireproof elevators for country stations and milling plants. In this case, while the total storage is only 70,000 bushels, the requirements of the owners demanded that it should be divided into small bins for the convenience of their business, the owners being the Climax Milling Company of Hopkinsville, Ky.

The building is 52 by 32 feet on the ground plan, with bins 60 feet deep. The storage is divided into fifteen bins, of which eleven hold 6,000 bushels each and four 1,000 bushels each. All are square, or rectangular, with self-cleansing hoppers. The cupola and roofs are of molded, reinforced concrete, with wire glass and steel frame windows. All spouting is of steel. The working house and adjacent mill buildings are of brick and mill construction.

It is interesting to know that a plant of this character can be erected at a cost not greatly in excess of what it would cost in wood construction and in practically the same length of time. The contractors, the Macdonald Engineering Company, 553 Monadnock Block, Chicago, began the work in the spring and completed it in just 100 days. The cost of this entire plant, including about \$1,000 worth of machinery, was only \$16,000.

A much larger and of course much more expensive structure on the same order has just been completed by the same firm, who, by the way, make a specialty of designing as well as erecting this class of buildings. This is the plant of the Lake of the Woods Milling Company at Keewatin, Ontario, whose possession of a magnificent water plant, guaranteeing the permanence of their milling industry, warranted the construction of the most permanent type of grain storage in connection with their mills. The general plan of the elevator is well shown in the engraving herewith. On the left side is a two-track concrete receiving shed, the cars running into the second story on a trestle twenty-five feet high. The three elevator legs are close to the receiving shed in the front of the elevator, above which are the cupola and conveyor gallery. The tanks are in three rows of four each.

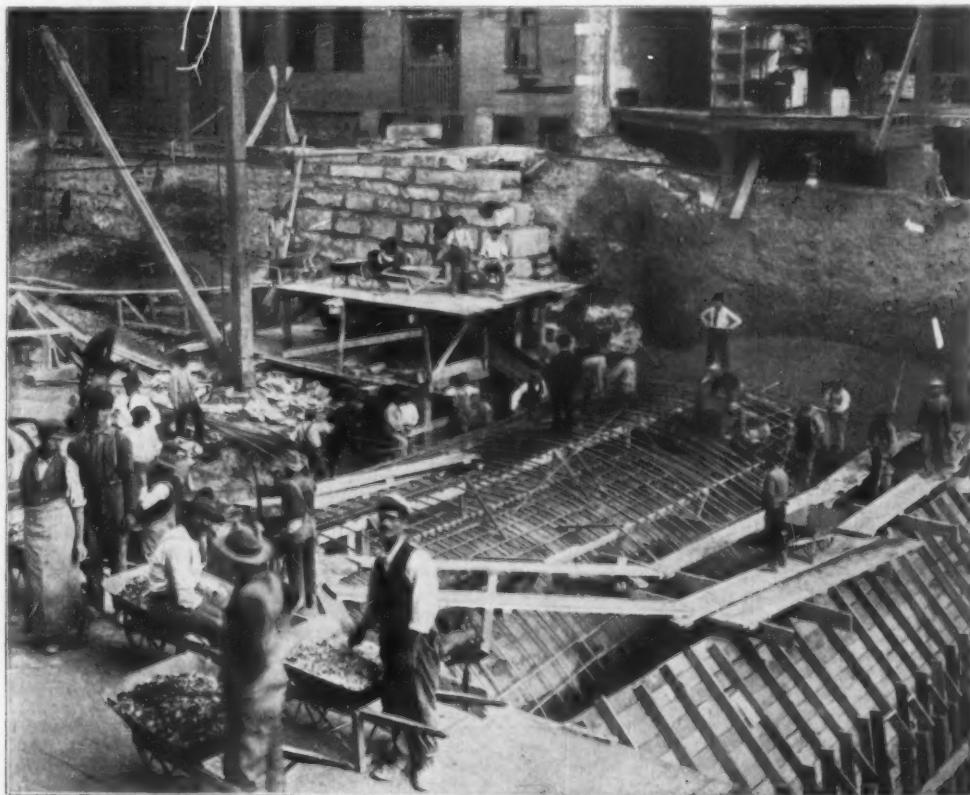
Of the twelve tanks seven are divided by partitions into five bins. Having as many as twelve sides makes the large tanks nearly circular and leaves six large interstices which are used for storage, as well as eight small interstices on the outside. The tanks are ninety-five feet deep, the structure being 92 by 123 feet and having a capacity of 750,000 bushels.

The concrete walls of the cupola are four inches thick all around the conveyor gallery, and the walls of the grain tanks are uniformly nine inches thick from top to bottom. The building is fireproof and has windows of wire glass in steel sash.

Space is economized by running the passenger lift between the up and down legs of one stand of elevators, and the spiral stairway between the legs of the other stand of cleaning elevators. Through the middle tank runs the large unloading leg, having buckets 20 by 8 inches. The distribution of grain in the front part of the building is by spout direct from the elevator heads, but the other bins are filled from three conveyor belts thirty-six inches wide. Grain is drawn off in the basement by three 30-inch belts to a cross belt in the rear running to the flour mill.

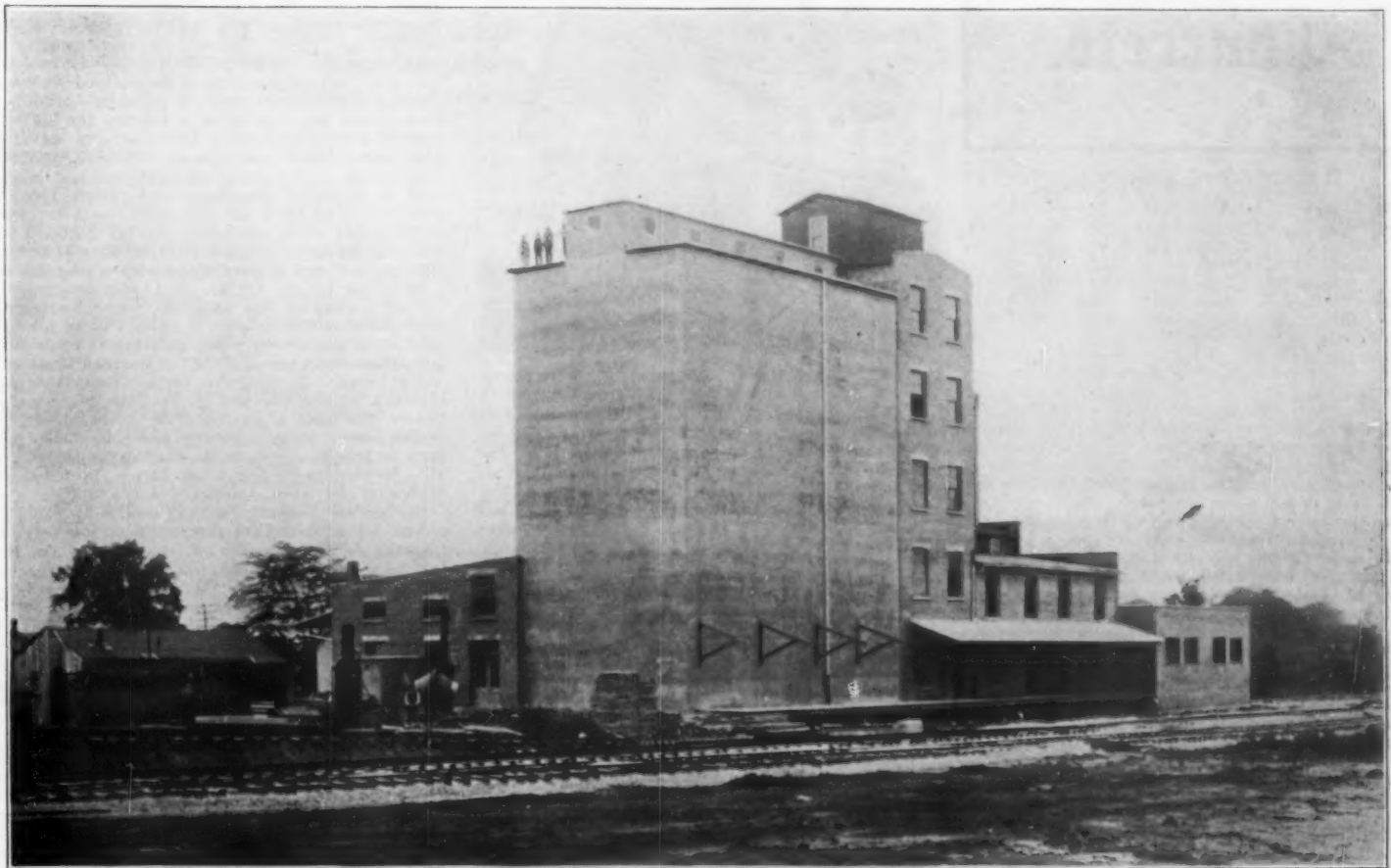
Advantage was taken of the 25-foot difference in the track and ground level to place two 1,500-bushel hopper scales directly under the track, so that grain can be weighed without the expense of elevating it to cupola, as is the practice in every other large terminal elevator. The mixing of wheat for the mill is done with a separate equipment, including a 6,000-bushel capacity stand of elevators and a 500-bushel hopper scale. The mixed grain is conveyed to the mill, which has 15,000 bushels of storage.

Of the three turbine water wheels, aggregating 2,000 horsepower, one drives a dynamo generating



REPAIRING BREAK IN THE ERIE CANAL AT SYRACUSE, N. Y.





REINFORCED CONCRETE ELEVATOR OF THE CLIMAX MILLING COMPANY, HOPKINSVILLE, KY.  
(The Smith Mixer used in this construction is shown at the left.)

an alternating current for the electric induction motors in the elevator and the electric lamps. In the cupola one motor drives the two cleaner legs and another the unloading leg. In the basement is a motor to drive all the conveyor belts in the basement,

and in the cleaner room over the track is another motor to drive the two Monitor cleaners of the largest size. The car puller has an independent motor of variable speed, hauling cars on each track in both directions.

The structure, exclusive of machinery, cost \$650,000. The Alpena Portland Cement Company furnished the cement and a Smith mixer was used in making the concrete for this as well as for the smaller elevator described above.



REINFORCED CONCRETE ELEVATOR OF THE LAKE OF THE WOODS MILLING COMPANY, KEEWATIN, ONT.

# Concrete.

## Cement Users' Executives.

The Executive Committee met at Atlantic City on the evening of September 9 and talked over ways and means for the greatest meeting ever, to be held by the National Association of Cement Users at Buffalo. They have facilities for the best exhibits ever placed and a meeting place either at the exhibit building or a theater that will be within easy reach. Arrangements are now being made for headquarters and we will shortly be able to make the definite announcement for the great January meeting in detail.

Special effort will be made to secure an enlarged membership on the basis of \$5 a year in preference to the old scheme of \$2, \$3 and \$5. Every man interested in the subject of cement products should be a member of this association, and if it is not worth \$5 it is not worth anything.

The Executive Committee are working hard to prepare a program that will embrace papers by well known engineers and specialists in the cement users' field and the educational feature of this meeting should be an incentive for every man connected with the industry to attend. It may not have come to your notice that the efforts to successfully conduct this association have been a matter of love on the part of the officials of the association; they have done excellent work and their efforts today are more intelligently guided, and the result will be that this Buffalo meeting will be a grand one. President Humphrey advises ROCK PRODUCTS that the East is now most enthusiastic; therefore with a large delegation from the West this will be the largest and most successful meeting ever held.

The gentlemen present at the Executive Committee meeting were: R. L. Humphrey, Merrill Watson, M. S. Daniels, H. C. Turner, C. R. Watson and Secretary W. W. Curtis, Chicago.

## Pretty Suburban Homes.

BUFFALO, N. Y., Sept. 15.—Concrete is popular in both construction work and sidewalks in Kenmore, a pretty Buffalo suburb, which is now enjoying a building boom. The first concrete house built in that village was constructed by Large & Rowland, mason contractors, now Large & Co. of Kenmore. The owner is Carl Filsinger and the house is located at 76 West Tremain Avenue. A picture of the structure appears herewith. The house has eight rooms and an excellent cellar. The cost was about \$2,500, including the cost of the lot. Mr. Filsinger is pleased with his home and gives among several other reasons the fact that the house is never damp, and with the exception of the upper part, which is of wood, does not need to be painted.

The second concrete house erected in Kenmore was built by John G. Danio of East Hazelton Avenue. Mr. Danio made his own concrete blocks, each of which is 20 inches by 8 inches by 8 inches. The house cost about \$1,200. A picture of this building is also shown here.

Mr. Danio was so well pleased with his house that he now does contracting work and is building a two-story flat on Myron Avenue, Kenmore, for E. Frank Moberg. Each flat has five rooms and the total cost is \$2,000. The cellar is being made of solid concrete.



CONCRETE RESIDENCE OF CARL FILSINGER, KENMORE, N. Y.



RESIDENCE OF JESSE AXTELL, BLUE RAPIDS, KAN.

Mr. Danio said: "I think that a concrete house is the only practicable one to build. There is no cost for paint; it cannot be excelled for durability, as it will never decay; there is not so much danger of fire; it keeps out moisture, if properly built, and I think it is the best all-around building material, no matter how far you look."

J. B. Rickert of 30 Villa Avenue, Kenmore, is building a concrete house in that village for R. M. Cramer and another for Burt G. Hitchcock.

Concrete walks are very popular in Kenmore, and at present there are upward of 14,512 linear feet of such walks in the streets in that village. Large & Co. and Thomas Lauderdale built most of these walks. The present building boom in Kenmore promises to continue, so that builders who use much concrete promise to reap a financial harvest.

## An Enthusiastic Contractor.

BLUE RAPIDS, KAN., Sept. 9.—Jesse Axtell & Co. have been steadily increasing the scope of their concrete manufacturing and construction operations. We present herewith an illustration of one of six residences recently completed. This house contains seven rooms, bath and two big closets, also cellar and cement sidewalk to front and side entrances, besides including the lot within \$2,000 for the total cost. Speaking of business, Mr. Axtell says: "I am enthusiastic over cement construction. I have been in the lumber business for years, but I can see that cement construction will displace lumber everywhere as soon as we get intelligent and honest contractors."

## Night School in Concrete Construction.

The Chicago Young Men's Christian Association has arranged a course of instruction in concrete construction under the direction of H. O. Ernst, M. E., who is a graduate of Zurich Polytechnical School and has spent two years in post-graduate studies, specializing in cement manufacture. He has been connected with the Allis-Chalmers Company, Milwaukee, for five years as their cement expert, and is now connected with the well-known engineering firm of Arnold & Co. of this city, having charge of their reinforced concrete work.

The method of instruction will be in the form of lectures and demonstrating exercises in the solution of practical problems. Some laboratory experiments and tests will be presented in a simple and practical manner for men who have not had school training in the higher branches of mathematics and science. The class sessions will be held every Wednesday night for twelve consecutive weeks at the Central Y. M. C. A., 153 La Salle Street. The course of study as outlined will take up the following topics: Ingredients, Mixing Concrete, Form Work, Placing Concrete, Plain Concrete Work, Cement Blocks, Reinforced Concrete, Chemistry of Concrete, and Structural Designs; also Plan Reading and Estimating. Much interest has been taken in arranging for this special course and the fees have been placed at the low sum of \$20.

## Strong Company of Block Makers.

VAN BUREN, ONONDAGA COUNTY, N. Y., Sept. 13.—The Adamant Cement Company has been formed here by New York capitalists for the purpose of manufacturing cement blocks. The directors are: A. G. Sherwood, 47 Lafayette place; C. S. Beardsley, 1986 Third avenue, and Charles A. Falcut, 874 East 163d Street, New York City. The capital invested is \$300,000.

## Leading Firm of Block Manufacturers.

PEKIN, ILL., Sept. 3.—One of the largest and at the same time most successful concrete manufacturing enterprises of Illinois is that of Saal & Brookings of this place. Recently a representative of ROCK PRODUCTS called at their place of business. The plant is contained in a large, long one-story building and was deserted. I poked my head in a window and withdrew it on a sudden, for the temperature inside must have been 200 degrees (they were curing blocks with steam). When I recovered I looked in at the closed windows and saw lots of work in process of completion and various types of machines. The yard, too, was piled up with blocks of all shapes, sizes and colors—enough to build several large edifices. Alongside the building were huge piles of sand and crushed stone. The following day I succeeded in finding Mr. Saal, who was superintending a gang of men on street work. During the conversation which followed I learned many interesting particulars, among which was that he made curbing sixteen years ago and that he has had to do with cement work for thirty-five years. Everything and anything in this line and in concrete interests him and he has spent a good deal of money conducting various experiments. Having heard they did good work in this line in Cuba he visited the island, and what he saw there astonished him. He found the Spaniards can teach Americans a few things.

He prefers Vulcanite cement and I was told by one of the local dealers that he must use over ten thousand barrels annually. I learned from Mr. Saal that he has over forty different patterns for concrete block work and considers the Hayden automatic the best machine for his purposes. He has put over \$1,500 into his outfit. He can make blocks from one inch to thirty-two inches in length and from two inches to sixteen in thickness. He has and uses the first mixer that was invented, a McKelvey power machine. He has two mixers in the shop and one for street work. He also uses a Positive Jeager machine for mixing for block work. He has an air tamping machine that is as near an imitation of the human fist as possible. Unless you wish to hear an explosive epithet don't mention water-proofing to Mr. Saal, as he said he paid \$5 for a gallon of some mixture, and having a piece of work on his own premises he used some on it. Soon afterwards, wishing to light his cigar, he happened to scratch the match on the work when, presto, there was a sudden and a big blaze, resulting in his getting burned, thus showing it was nothing but kerosene.

## Test of Blocks Required.

PHILADELPHIA, PA., Aug. 30.—The building authorities have decided that all cement used in concrete blocks must pass the specifications of the American Society for Testing Materials. Blocks twenty-eight days old must have an average crushing resistance of at least 1,000 pounds per square inch, no deduction being made for hollow spaces. No load greater than eight tons per square foot, including the weight of the wall, may be imposed on these blocks, nor can they be used until they have been tested by some reliable laboratory for transverse and compressive strength, absorption and resistance to fire and frost, in accordance with detailed requirements.

Hollow concrete blocks may be used for buildings six stories high or less. The blocks must be made of a mixture consisting of 1 part Portland cement and not over 5 parts sand, gravel, crushed rock or other suitable aggregate material. The hollow space must not exceed 33 per cent and the blocks for basements and lower stories must not have more than 20 to 25 per cent hollow space. Where joists impose a concentrated load exceeding two tons, the blocks must be solid, and where the load exceeds five tons the blocks for two courses and for a width of three feet below must be solid.



CONCRETE HOUSE OF J. G. DANIO, KENMORE, N. Y.



## Concrete in Nashville.

**Great Progress in the Athens of the South—Elegant Homes and Substantial Business Structures—Some Progressive Contractors and Concrete Engineers of Tennessee's Capital.**

NASHVILLE, TENN., Sept. 14.—About the most complete exemplification of successful architecture along concrete lines is presented in Nashville. The capital of Tennessee has long worthily worn the appellation of Athens of the South, and right well has her love for the beautiful in art, music and architecture followed the fine ideals of ancient Greece. Nashville is an old city. Ever since the French traders came and bartered on the banks of the Cumberland her mark has been set for a great trade mart, and in the last two years she has been coming into her own more rapidly than during any former period of her history. More buildings and industries have become hers within this time than ever before for such a period. Concrete work has had a fair place in this two years' development. Located in a limestone district, where much natural stone has played a part in her earlier buildings, fences and park adornments, and fairly adjacent to other natural stone districts, these facts have not retarded the recognition given to artificial stone work since it has been once introduced and so favorably tested.

In Murphy Addition, the West End fashionable residence district, some of the most elegant cement block houses to be seen in the South stand as monuments to

incipient success of concrete builders. On Union Street, which runs near President James K. Polk's old home place, and which intersects the main shopping district and is itself one of the oldest streets in Nashville, stands an elegant five-story building for commercial purposes that did not rise phoenix-like from the fire, but which actually went through the flames without damage to the walls and concrete work, though the raging torrents of flames and water utterly destroyed the interior and the stock within the building. This is now restored so far as the interior is concerned and stands a monument to a Nashville concrete firm. One of the accompanying illustrations shows the building of Montgomery & Co. as it is restored, and another larger one shows it as it looked immediately after the fire, an account of which was published in the April 22 number of *Rock Products*, the photograph from which the engraving was made having been taken when the structure was still smoking. The fire entirely gutted the upper story and roof. The building had been erected about a year before by the Grantitoid Construction Company of Nashville, of two-piece concrete blocks, made at their plant under hydraulic pressure by what is known as the American hydraulic system, the composition of



THE MONTGOMERY & CO. BUILDING AS IT APPEARS NOW.

the block being crushed stone, granite screenings and Kosmos Portland cement. At one time during the fire the upper walls of the building, as well as the concrete ornamental cornice and top courses, were almost at white heat—at least, they seemed to be transparent—but when the fire was over and the building was approachable it was discovered that, notwithstanding the great volume of water poured upon the concrete walls while in such a heated condition, little or no damage had resulted, except for a few trivial chips in the sills of the windows and the blocks next adjacent to the openings. The walls were intact. The building was stocked with highly inflammable material, being occupied as a furniture warehouse.

Some pretty examples of concrete block work are to be seen in fences and mausoleums at the local cemeteries, in artistic automobile houses and special out-buildings that adorn elegant estates in the blue grass district of Middle Tennessee. Concerns that operate along concrete lines in bridge, paving and general engineering work have their home in Nashville and have executed work through the Southeast and in many instances north of the Ohio river.

One concrete firm in Nashville erected sixty-two handsome residences in the city last year, to say nothing of the work it did outside the city and the work of several other flourishing firms in this district. One of the largest bridge contracts ever awarded in Nashville, running in valuation up into the hundreds of thousands of dollars, is now being done by a Nashville firm, and concrete plays an important part in it. Several jobs in reinforced concrete are to be found here in the way of warehouses and cold storage buildings that are a part of the year's industrial progress in Nashville.

Most of the architects in Nashville have had a part in planning concrete structures either for business or residence purposes. Several of the firms in Nashville who make concrete blocks also do a contracting business and erect the structures.

Among the various firms in Nashville who have achieved a prominent place among Southern builders and manufacturers in concrete are the Newsum Crushed Stone and Quarry Company. Their main offices are located in the First National Bank Building, and they have an elaborate plant and quarries in and near Nashville, the quarries being at Fuller's Siding, on the Nashville, Chattanooga and St. Louis Railroad. They have a corps of competent architects and draughtsmen in their office and have erected buildings in the South that would do credit to the oldest concrete firms in the United States. The illustrations with this article give some idea of their plant, quarry and work. They use the Coltrin machine in manufacturing stone, and they also operate a No. 6 and a No. 3 Austin crusher. Their separator was made by the Austin Company and is a revolving screen. Their crushed stone comes from their own quarry and is of very fine quality. The work represents one part Portland cement and two parts crushed limestone dust in face, and one part Portland cement and four and one-half parts limestone screenings in the body of the block. Their shipping business in crushed rock for concrete work is quite extensive. The block machine at their plant has a capacity of 1,200 blocks per day. The plant turns out everything needed for house-building, including concrete pillars, porch and



THE MONTGOMERY & CO. BUILDING IMMEDIATELY AFTER THE FIRE.  
(The Walls and Concrete Work were Pronounced in Perfect Condition, Although the Interior was Completely Gutt.)

chimney blocks. The Newsom Company are Southern agents for the Coltrin Manufacturing Company of Jackson, Mich., handling block machines and brick machines. They have done all their block work with these machines. The blocks are perfectly waterproof and also proof against moisture. The Newsom Company used the machines in question two years before they took the agency. The machine sells for about \$200, with all parts and attachments. A. E. Manierre, secretary and sales manager of the company, assures the Rock Products representative that the prospects for the next twelve months look very bright for concrete work in Nashville.

Foster & Creighton are a Nashville contracting firm who have executed some enviable jobs in concrete work, not along house-building lines, but in engineering work. Just now they have upward of a hundred men engaged in building two bridges over the Cumberland River. There are eight piers to be built, four in water. In this job they are building the cofferdams on land of heavy timber and are floating them to the desired position, where they are sunk. Behind this wall, which is kept in position by a heavy anchorage load, the water is pumped out clear to the bottom of the river so as to provide a space sufficient for the men to work. Then the laying of concrete is begun. About four feet of concrete is laid each day.

There are some fine examples of reinforced concrete construction in grain and other warehouses in Nashville. The W. J. Oliver Company, of Knoxville, Tenn., has done some creditable work of this character in Nashville as well as in many other Southeastern points.

The Selden-Breck Construction Company, with offices in Nashville, Memphis, St. Louis and other cities, has also done some reinforced concrete work here.

The Granitoid Construction Company, whose plant is located on West Cedar Street, at the crossing of the Illinois Central Railroad, is another Nashville company which has had a most successful career. N. D. Overall is the manager of this company. They have several jobs on hand now. Their factory has a capacity of 1,000 blocks per day. They use in their work large quantities of Lehigh, Kosmos and Red Diamond cements and a fine grade of crushed rock. One of their jobs which has come to be noted in the South is the five-story building at the corner of Union Street and Fifth avenue, North, for the Montgomery Furniture Company, and already alluded to as having gone through a fire. It is reinforced work and a job of magnificent finish. The building inspector for the city, an able and well-qualified expert, made a critical and careful examination of the walls and pronounced them sound, neither the water nor fire having impaired their structural value in any way.

The Granitoid Construction Company are also erecting at Twelfth Avenue, North, and Broadway a three-story warehouse and factory building which will be occupied when finished by the Gregory Tale, Blackboard and Crayon Com-



QUARRY OF THE NEWSOM CRUSHED STONE AND QUARRY COMPANY, NEAR NASHVILLE.



CRUSHER PLANT OF THE NEWSOM CRUSHED STONE AND QUARRY COMPANY, NEAR NASHVILLE.



pany. The building will have three stories and a basement.

The T. J. Mason Concrete Company have also built a number of houses here lately. They are using a Hercules block machine and a Knickerbocker Company cement mixer.

The Nashville Artificial Stone Company, which will manufacture building blocks, has only recently been launched here. It is in the hands of experienced men and will no doubt be a creditable addition to the concrete business of Nashville. The gentlemen identified with the company are D. M. Huddleston, L. A. Beasley and L. L. Reeder.

A Nashville company that does a considerable business in cement lines so far as paving and sewer contracts are concerned, is the Southern Bitulithic Company, with quarters in the First National Bank Building. They now have municipal, government or private contracts in nearly every State in the Southeast.

#### Retaining-Wall Contract.

The contract for the construction of a number of long retaining walls at Somerset, Pa., has been awarded to W. G. Ferner of that city. The largest of these walls will completely surround the Courthouse there, a structure that occupies an entire block. The walls will be about one foot in thickness and from three to ten feet in height.



TYPICAL MODERN CEMENT BLOCK RESIDENCE RECENTLY ERECTED IN NASHVILLE.

#### ANOTHER BRIDGE FOR ST. LOUIS.

##### The Massive Structure Will be of Concrete with Bedford Stone Facing.

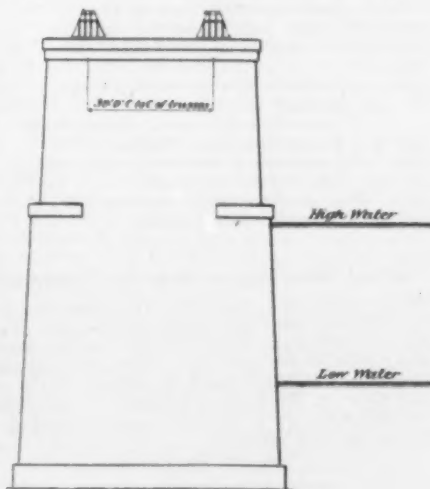
St. Louis, Mo., Sept. 14.—The St. Louis Electric Bridge Company is the name of the corporation financing the big new bridge which will be the third to span the Father of Waters at St. Louis. The bridge is intended primarily for the McKinley system of interurban electric railroads, but it will accommodate, in addition to a double rail track, two roadways for team traffic, etc., and two roomy sidewalks for foot passengers. The structure will be much heavier than the Merchants' Bridge at St. Louis. The total cost, including right of way, will approximate \$2,500,000. Ralph Modjeski of Chicago, who built the famous Thebes Bridge, is the engineer, and the bridge will be built according to his plans and specifications and under his supervision. Mr. Modjeski—who, by the way, is a son of the great actress Modjeska—is also carrying out some important bridge work similar in character to the new St. Louis bridge on the Coast, where the Southern Pacific Railroad Company is crossing the Willamette River at Portland and the Columbia at Vancouver. The combined cost of these bridges will be \$4,500,000.

The new bridge over the Mississippi, which will cross the river from Salisbury Street, in St. Louis,

to Venice, on the Illinois side, will have a superstructure of steel and the substructure will be of concrete and stone. The specifications for the steel work, which will require about 6,000 tons of metal, will not be ready for a month or more, but the substructure will be built by the Missouri Valley Bridge

and Iron Company, whose general offices are at Leavenworth, Kan., the contract having been let to them on August 3. E. H. Connor is the chief engineer of the contracting company. The cost of the work embraced in this contract, which covers the piers for the main bridge, exclusive of the steel work, approximates \$385,000. The four river piers will be faced with Bedford stone, with concrete backing and will rest on timber pneumatic caissons and cribs filled with concrete. This concrete will be composed of cement, sand and gravel. The other piers will be built of concrete entirely and will rest on timber pneumatic caissons—all caissons to be sunk to rock. Three shore piers will be built of concrete on pile foundations. Mr. Connor informs Rock Products that orders for the materials have not yet been placed, but Smith mixers will be used exclusively in preparing the concrete. The company will also use Hall air-compressors.

ROCK PRODUCTS is indebted to W. E. Angier, representing Ralph Modjeski, for a draft of the general elevation of the structure. This is reproduced herewith. The piers are lettered and numbered from west to east. The reproduction herewith of the general plan of the bridges is on a scale of one inch to 300 feet and of the pier one inch to forty feet.

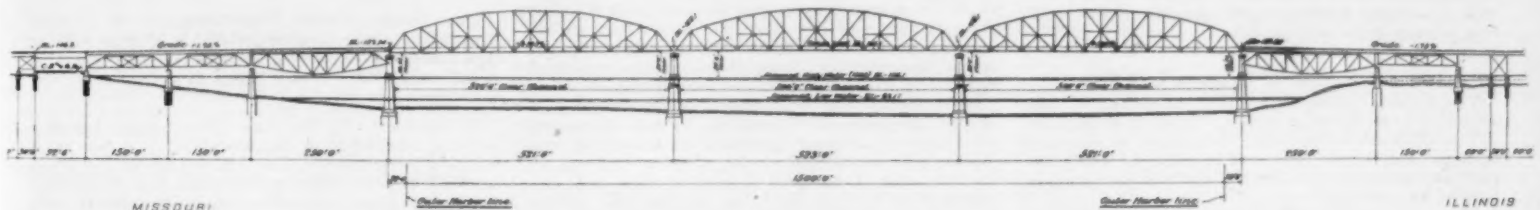


ELEVATION AT PIERS II III.

(Scale 1" to 40'.)

#### Match Factory of Concrete.

OSHKOSH, Wis., Sept. 14.—The Diamond Match Company are completing a four-story and basement factory building here, consisting of a main building and a wing, the dimensions of which are 397 by 72 feet plus 130 by 72 feet. The Chicago-Oshkosh Company furnished the brick, and the Cook & Brown Lime Company of Oshkosh superintended the concrete work, using Atlas Portland cement. The plant will be ready for occupation November 1.



PIER I

PIER II

PIER III

PIER IV

GENERAL ELEVATION OF THE NEW MCKINLEY BRIDGE AT ST. LOUIS. (Scale 1" to 300'.)

# Plaster.

## The Keene Process.

Attention has been called to the excellence of the Keene process. Its product may be distinguished from plaster of paris by its texture, but more by its slow setting and coolness in working, and by its intense strength, toughness and continual hardening quality. It is fire-proof and capable of high polish. For general plastering its cost is not greater than any patent plaster, and much cheaper than imported Keene's cement. It may be used for all practical purposes, and for special purposes as well. For wainscoting, bathroom finish, statuary, etc., it has no superior. Among great buildings in the country where it has been used are: Boatman's Bank, St. Louis; Pennsylvania Station, Pittsburg; Standard Oil Building, 26 Broadway, New York; New Willard Hotel, Washington; Waldorf-Astoria, New York; the Leiter residence, Washington, and Biltmore Castle, Asheville, N. C.

A number of attempts have been made to manufacture Keene's cement in America, but the only successful effort has been made by Best Brothers & Co. at Medicine Lodge, which has the only Keene's cement plant in America. It is believed that this is the beginning of an extensive development of the gypsum industry in this part of Kansas. Under the present management the two obstacles to the development and expansion of the industry in the past have been removed by procuring the raw material on the line of the railroad and by persons taking hold of the enterprise who have ample capital to develop it.

## Where Best Keene's Cement is Made.

Some time ago the mill of the Best Brothers' Company at Medicine Lodge, Kan., was destroyed by a tornado and the result is the reorganization of the company with new capital and directors, men well known in this business. The mill will be built on a larger scale.

Best Brothers' Keene's Cement Company has been organized under the laws of Ohio with a capital stock of \$100,000 and has bought the old plant with its good will and all its property from Best Brothers & Co. The new company has also acquired a large quantity of gypsum land on the line of the Denver, Enid & Gulf Railroad four miles above Sun City and twenty-six miles from Medicine Lodge.

The crude gypsum for the mill and also for shipping to Portland cement plants and other manufacturing establishments using crude gypsum will be obtained at this point. The railroad runs through the gypsum deposit and a switch will put in at once and the quarry opened. J. B. Gano will be quarry superintendent.

The stockholders of the company are John A. Kling of Cleveland, Ohio; John Sherwin of Cleveland, Ohio. Thomas J. McNulty of Chicago, Ill.; F. P. Hinkins and Gordon Willis of St. Louis, Mo. Mr. Best will be general manager.

It is expected that the new mill at Medicine Lodge will be open by October 1. The demand has been so great for the finished product that, as heretofore stated, the supply could not by any means keep pace with it. The raw material product was heretofore about eight miles distant from the railroad, necessitating hauling by wagon, a slow and tedious process. The stock of the late plant was also largely owned in England, and by conservative persons who did not wish to increase holding or associate themselves with new persons in the enterprise.

## The Production of Gypsum in 1906.

The gypsum mined in the United States in 1906 amounted to 1,540,585 short tons, valued at \$1,147,129.

This production represents an increase in quantity of more than 47 per cent, and in value of nearly 40 per cent, as compared with that of 1905, and exceeds that of any previous year.

The material is produced in seventeen states and territories besides Alaska, and in connection with the mining, mills for grinding and burning it are operated at nearly all the places of production. As to

relative rank among the states producing gypsum, Michigan still holds first place, New York regains second place, and Iowa is a close third. The other states show few changes since 1905, their present rank being as follows: Texas, Ohio, Oklahoma, Kansas, California, Wyoming, Virginia, Nevada, Oregon, Utah, New Mexico, Colorado, South Dakota, Alaska and Montana.

An interesting use to which gypsum is put, especially in England, is the Burtonization of beer. The reputed excellence of certain British beers, notably those of Burton and Newark, is attributed to the presence of calcium sulphate in the natural water used in their preparation. It has been calculated that 350,000 pounds of gypsum are annually imbibed in potations of Burton beer, and since gypsum is soluble to a certain extent, attempts have been made with varied success to add similar artificial salts to water not derived from gypsum-bearing beds, and large quantities of gypsum are purchased by brewers in England for this purpose. This addition, although advantageous, does not produce so perfect a combination of salts as that existing in the natural waters of Burton-upon-Trent.—U. S. Geological Survey report.

## Plaster Poetry.

[J. T. Brazil of the American Cement Plaster Company, Acme, Texas, is the poet laureate of the plaster business. He contributes to Rock Products the following verses on the pleasure of running a plaster mill.]

I've knocked about considerable  
In these United States.  
Punched cattle in the Panhandle  
And lumbered on the lakes.  
I tried my hand at railroading,  
Prospected with a drill,  
But was never "up against it"  
Till I struck a plaster mill.

I'm there at five in the morning,  
And stay till ten at night;  
I do my very level best  
To keep things going right.  
But we never have troubles singly  
They all come in a lump.  
We have no sax, or twine, or tags,  
Or the dun mule's in the sump.

We have all kinds of worries:  
We get our kettles stuck,  
Can't fill our orders fast enough,  
Or the mixer men have struck.  
Just as we get things started up  
And the wheels begin to hum  
The oiler yells adown the stairs:  
"The reel is on the bum!"

One dealer says our stuff is long;  
Another says too quick.  
It seems that they spend all their time  
In studying how to kick.  
Our pathway is not strewn with roses,  
And mostly it's up hill—  
But, gentle reader, such is life  
Around a plaster mill.

## Wood Fiber Plaster Plant for Alabama.

HUNTSVILLE, ALA., Sept. 13.—The Huntsville Wood Fiber, Plaster and Lime Company has been organized and will erect a mill for the manufacture of patent fiber plaster and lime. The capital stock of the company is \$25,000 and the officers of the company are: A. M. Booth, president; E. M. Forbes, vice president; J. R. Stevens, secretary, and A. G. Proctor, general manager.

## Will Build Plaster Mills.

SALT LAKE CITY, UTAH, Sept. 3.—The directors of the recently organized National Gypsum Company held a meeting yesterday afternoon and discussed the proposition of building a mill and possibly two of them at or near fine deposits of native gypsum, which the company owns, one in Lost Creek Canyon, above Salina, and the other one on Chicken Creek, near Levan, in Juab County. W. H. King is president of the company, Hugh J. Cannon vice president and Joseph J. Cannon secretary and manager.

G. B. Hobbs, who is an expert in the building of plaster mills, was at the meeting, as was also representatives of different processes of converting the gypsum into commercial plaster of paris. As soon as the character of the mill is decided upon it is the intention to build a plant for the handling of the Lost Creek deposits, with a probability that the mines near Levan will also be equipped. There is practically unlimited demand for plaster of paris and the company expects to build up a big business.

## A Modern Plaster Mill.

RUEDI, COL., Sept. 1.—The Roaring Fork Plaster Company have completed the erection of an up-to-date steel plaster mill and they announce that they are in full operation with a daily capacity of 200 tons, and are ready to supply gypsum, cement, rock plaster and plaster paris. They especially call attention to their "Bulldog" brand of plaster and plaster paris. The Colorado Cement and Plaster Company are the exclusive selling agents, and are located at 414 Charles Building, Denver, Colo.

## New Firm Takes Control.

WAUTONGA, OKLA., Sept. 16.—The entire holdings of the Orient Cement and Wall Plaster Company have been taken over by the Monarch Plaster Company, who will manufacture the Monarch brand of plaster. The officers of the new company are: C. H. McNider, president; M. E. Fisher, vice-president, and J. H. Lary, secretary and treasurer.

There will be no material change in the working force of the company. Mr. Lary will take entire charge of the mill and purchasing department. Mr. Fisher taking full charge of the sales department.

## Plaster Board Company for Memphis.

MEMPHIS, TENN., Sept. 5.—The Forbes Plaster Board Manufacturing Company is the style of a new corporation that will establish in Memphis in the near future a plant for the manufacture of plaster boards. E. M. Forbes, who is promoting the company, says that everything is in readiness to begin business as soon as the special machinery is completed at St. Louis.

## New Incorporations.

The Oklahoma Cement Plaster Company has been organized at Alva, Okla., with a capital stock of \$500,000. The incorporators are D. B. Zimmer, S. F. Harris and D. A. Murphy.

The O'Rourke-McCabe Plastering Company of New York has been incorporated for \$15,000 by J. C. and T. A. O'Rourke and E. J. McCabe.

The Eastwick Plaster Company of Wilmington, Del., has been organized to manufacture plaster. The capital stock is \$100,000.

The Utah-Nevada Plaster and Cement Company of Salt Lake City, Utah, has been incorporated for \$125,000. The officers of the company are: J. Sharp, president; C. S. Tingey, vice-president; C. H. Tingey, secretary.

B. H. Ward, manager of the American Independent Gypsum Company of Fort Dodge, Iowa, one of the new mills to commence operations in that district, was a visitor in Chicago this week. Mr. Ward could not be found by a Rock Products man, but he was probably out with his order book gathering in orders from the local trade.

We had a pleasant little visit the other day with E. H. Goodrich of the Windsor Plaster Company of Boston. He reported that the plaster business was active; that dry mortar was making great progress in the New England states, and pointed to several large jobs that the Windsor Company had supplied in times past, where 60,000 to 100,000 yards of plaster had been consumed.

S. L. Avery, president of the United States Gypsum Company, Chicago, returned a few days ago after a pleasant summer outing at his Michigan home. He had again taken up the grind incidental to the enlarged business of the U. S. Gypsum Company.

With the numerous specialties now manufactured by this company the field force, which comprises salesmen in practically every section of the United States, is enjoying an unusual run of orders, when the fact that trade was retarded by the long wet spring is taken into consideration. The publicity campaign of this institution is teaching the consumer who buys false teeth or wants a white coat that the U. S. can furnish anything in plaster goods. They have a standing invitation. Have you ordered? Sure!

The Neosha Valley Fuel Company of Council Grove, Kan., have decided to build a gypsum mill at that place. A deposit of gypsum of high grade is found near here. Adam Moser is president of the company.

ALAMOGORDO, N. M., Aug. 28.—A new industry is being established at Sacramento City, a few miles south of Alamogordo. The Alamo Cement and Plaster Company has been incorporated and is actively engaged engaged in putting up a four-kettle mill, which will have a daily capacity of ten carloads of finished material, and will be in continuous operation day and night, running two shifts of twelve hours each.



## Sand-Lime Brick

### First in New England.

FALL RIVER, MASS., Sept. 2.—The Fall River Brick and Concrete Company has been incorporated with capital stock of \$40,000. William Dacey, of the contracting firm of Stewart, Dacey & Co., is president; Francis M. Hunter, clerk and treasurer. They will manufacture building materials of concrete upon an extensive scale, and a part of their equipment will include a complete sand-lime brick plant. The company has acquired what is said to be a fine sand deposit suitable for making this class of brick of the highest quality. The American Clay Working Machinery Company of Willoughby, Ohio, has the contract for installing the machinery. Mr. Carmichael, from the factory, is on the ground in charge of the installation.

### New Plant at Hummelstown, Pa.

PHILADELPHIA, Pa., Sept. 16.—The Henry S. Spackman Engineering Company has recently completed a sand-lime brick plant for the Hummelstown Brownstone Company at Hummelstown, Pa. This plant includes also a large crushing and screening plant for the production of ballast, concrete, stone and sand. In this plant the quarry spawls are crushed and screened, the coarse pieces are then sold as stone and the residue of the finest sand is used in manufacturing brick. These bricks are of a fine



SAND-LIME BRICK PLANT AT HUMMELSTOWN.

brown color and are finally marketed in Harrisburg and surrounding country. The capacity of the plant is 40,000 per day; cost, \$50,000.

### Will Increase Capacity.

INDIANAPOLIS, IND., Sept. 3.—Lawrence Elkins, president, and Charles W. Foster, secretary of the Indianapolis Composite Brick Company, have completed the financial arrangements for the purpose of increasing the capacity of their plant, which has been doing a flourishing and profitable business since its organization two years ago.

### New Machinery Concern Takes Hold.

The Sand-Lime Brick Plant Company, with offices at 20 East Forty-second Street, New York City, has been organized to take over the "Schwarz Scientific System" for the manufacture of sand-lime brick plants. The president of the new company, S. F. White, M. E., is a graduate of Stevens Institute and has for a number of years been prominently identified with the sulphur industry. Plants for manufacturing sand-lime bricks by "Schwarz Scientific System" have been manufactured for a number of years, and many of them are in successful operation in various parts of the country.

### Equipment at the New Schenectady Plant.

The plant established some months ago in Schenectady, N. Y., by the Sandstone Brick Company has buildings and equipment said to be models of their kind. The brick machinery consists of two Samson presses, dryer, conveyors, mixers, cylinders and cars.

The sand and hydrated lime is first measured off into a pan mixer. From there it falls by gravity into a pug mill. After traveling through this mill it is elevated to another pug mill mixer which stands on a platform. Here the water is added to the mixture, which leaves the two mills free from lumps and ready to be made into bricks. The presses, fed by a conveyor, are of the well known rotary type. The mixture of sand and lime is received by the press in a mixing pan, which, besides giving the material an additional mixing, feeds the press and fills the moulds automatically. The table on which the bricks are made is circular and revolves around a center post. The power for the presses is transmitted by means of a crankshaft connected to a massive slow-moving rocker beam. As the bricks are made one at a time, enormous pressure is received by each individual brick. The finished product is delivered to cars holding 1,000 bricks. Two Stirling boilers supply the steam required and the power plant equipment includes an Allis-Chalmers engine of the well-known "Reliance" pattern.

### Looking for New Location.

WAYCROSS, GA., Sept. 2.—The owners of the Indiana Sand-Lime Brick Company of North Jusun, Ind., who have recently sold their plant, are prospecting for a new location and have practically decided to equip a plant here, as they find the sand deposits of this neighborhood very adaptable for their purposes. The plant already operating here has all it can do supplying the local demand, without shipping any.

### An Important Decision.

An important decision, which establishes a vital principle applicable to the transportation of many articles besides brick, has been rendered by the United States Commerce Commission in the case of the Stove-Fuller Company (of Cleveland, O.) against the Pennsylvania and the Baltimore & Ohio Railroad Companies. The decision is as follows:

"1. Complaint in this case was directed solely against present differences in defendants' rates on fire, building and paving brick from Empire, Strasburg and other points in Ohio to New York City and other eastern destinations, but no attack was made upon the reasonableness of the rates on either kind of brick except as involved in the claim that any difference in the rates for the different kinds is lawful. Held, Upon the facts and circumstances of the case, that no such distinction between these three classes of brick, which are made of the same material, come out of the same kiln, are nearly alike in color, and are of the same size and weight, exists as justifies a difference in rates. To hold otherwise would be to promote false billing by the shippers and to require carriers to make a practically impossible examination into the use of which each shipment of these brick was put.

"2. Classification must be based upon a real distinction from a transportation standpoint. Aside from the difficulty in learning what use the brick were to be put to upon reaching their destination, the commission can not regard a classification as scientific, or a difference in rates as well based, which is altogether founded upon a distinction that has no transportation significance. Such a differentiation, if permitted and extended throughout the various classes of freight, would lead to an almost endless multiplication of rates, which could find no excuse save the use which might be made of the article transported."

Commissioner Lane, in his report to the commission, points out very clearly the injustice of charging one rate for fire brick and another for building brick and still another for paving brick, as it does not cost the railroad any more to haul one kind of brick than another. In the hearing it was developed that the policy in establishing rates was to charge as much as the traffic would stand. It was argued that, as the iron business is profitable it could afford to pay well for transporting brick for use in its furnaces. The idea is the same that governs the physician who charges a rich patient more than a poor one, but it is hardly a principle that can be allowed to govern in railroad transportation.

While the law distinctly prohibits discrimination in rates of freight, unjust classification discriminations are still common, and this decision is therefore of great interest to manufacturers generally. The Stove-Fuller Company deserve the thanks of the brick trade and of many other lines for bringing this case to a successful conclusion.

The Holmes County Coal and Clay Product Company has been organized at Millersburg, O., with a capital of \$75,000. The officers are: President, C. D. Perkinson; vice-president, R. L. Palmer; secretary and general manager, W. P. Welker; treasurer, C. J. Fisher. Operations will commence at once.

## Clay.

### A Change in Classification.

FORT DODGE, IOWA, Sept. 18.—An officer of the Western Stoneware Company who recently visited this city has given out the statement that the company would rebuild their plant destroyed by fire two years ago on a much larger scale. This conclusion was decided upon after an investigation of affairs here and a recent change in freight rates favorable to their locating a plant in this section of the State. The motive which prompted them most was the change in freight rates. Previous to the present time they were able to operate from other branches into this territory on an equal basis with competitive factories, but the change in rates enables them to do much better with a plant at Fort Dodge. Their former plant in this city had been operated for about forty years previous to the fire.

### Regarded as a Good Salesman.

ST. LOUIS, Mo., Sept. 18.—Dropping in at the office of the Mitchell Clay Company on Manchester Avenue, near their fire brick works, the ROCK PRODUCTS man learned some particulars of interest, among which was that the business was established by the father of its present head in 1868. Mr. Mitchell also stated that their product was extensively used by cement manufacturers for kilns, also iron and steel, lime and glass makers from Canada to Mexico. As a striking instance of the preference which some concerns have for their fire brick he informed me that a Chicago customer who installed a plant in New Jersey, notwithstanding plenty of good fire brick might have been purchased in that section, favored them with an order for brick for this new plant. The Mitchell Clay Company have just placed an order for a big dry pan for grinding and have decided to have cement used in place of the usual timber sill, 12 by 18 feet. Mr. Mitchell stated that fire clay is mined just as coal is, and it is pretty nearly as hard, since powder is used in blasting. It comes from the mine in large lumps, which in being exposed to the weather on the surface in time disintegrate into a finer form, and the material is also improved by atmospheric conditions. The Cheltenham district furnishes very superior fire clay. Business is very good with the company and the plant is being run to its fullest capacity. Mr. Mitchell said he regarded ROCK PRODUCTS as a valuable salesman (as he termed it) for their fire brick.

### Cement Kiln Liner Specialists.

ST. LOUIS, Mo., Sept. 20.—Among the industries for which this great manufacturing center is famous is that of clay products in every form. One of the leading companies is the Laclede-Christy Clay Products Company, recently formed by merging the interests of the Christy Fire Clay Company and the Laclede Fire Brick Manufacturing Company, whose output in fire brick, fire clay, sewer pipe, chimney tops, kiln linings, boiler tile, etc., is undoubtedly the largest in this section of the country.

The latest specialty which they are putting on the market is Bauxite liners for rotary cement kilns. The sale of this product to the cement manufacturers has increased with rapid strides, and among the large contracts for linings taken in the last few weeks was one for material for the new Ash Grove Portland Cement Company, Chanute, Kan. The company reports receiving orders from plants located as far east as Pennsylvania and New Jersey. This specialty of the company has passed the experimental stage, and it looks as if the question is now one of capacity, duplicate orders being received almost daily.

The Bloomfield (Ind.) Vitrefied Brick and Tile Company has been incorporated at Indianapolis, Ind., with a capital stock of \$50,000, by C. C. Stein, Theodore Schmutz, William Vanmeter, Joseph E. Shryer.

The Mt. Jewett Fire Brick Company has been incorporated at Mt. Jewett, Pa., with a capital stock of \$200,000, to manufacture fire brick, etc.

The Mason City Brick and Tile Company of Mason City, Ia., who already have three plants in operation, have just organized the Mason City Drain Tile Company.

# Roofing.

## The National Association of Master Composition Roofers of U. S. A.

P. LeGoullon, Pittsburg, Pa. .... President  
S. L. Foster, Norfolk, Va. .... First Vice-President  
H. C. Smithers, Indianapolis, Ind. .... Second Vice-President  
C. A. Monks, Louisville, Ky. .... Secretary and Treasurer

Official Organ, ROCK PRODUCTS.

## NORFOLK CONVENTION.

### Progressive Measures Adopted Which Suggest a New Era of Prosperity for the Composition Roofer.

NORFOLK, VA., Sept. 10.—The sixteenth annual convention of the Master Composition Roofers' Association of the United States met at the Lorraine Hotel in Norfolk, Va., on Sept. 10 and 11. While the attendance was not satisfactory, yet the old guards were on hand and a few new ones.

Norfolk was selected on account of its close proximity to the Jamestown Exposition, and it was thought that this fact, coupled with the delightful weather, would bring out a large attendance.

While the association is one of the oldest of its kind in the United States, and has enrolled on its membership the majority of the master composition roofers of the country, there has not been the interest displayed in the association's affairs that there should have been by the general run of roofers all over the country. There is so much that could be accomplished by active co-operation that it has always been a source of wonderment to those who have guided its destinies for these many years, that the roofers did not appreciate to a greater extent what was being done for them.

The National Sheet Metal Workers' Association has grown stronger and stronger with each succeeding year, until now it is one of the most powerful organizations to be found anywhere. For this reason it is all the more strange that the master roofers have not been able to get a larger attendance at their annual meetings.

C. A. Monks, president of the association, called the roofers to order at 10:30 o'clock on the morning of the 10th. All of the officers and directors were present.

Secretary and Treasurer William K. Thomas read his report. It showed the association to be in a flourishing condition, and with a comfortable balance in the treasury. Mr. Thomas also reviewed the work of the past year in his report and outlined plans for the future of the organization. Besides attending to the regular routine business the morning session was devoid of any special interest.

New members were elected as follows:

S. L. Foster, of Foster & Sons Company, Norfolk, Va.

The Bohmer Roofing and Cornice Company, Norfolk, Va.

Benjamin Foster, of the Genasco Roofing Company, Philadelphia.

One of the most important things decided at this convention was to admit the manufacturers. This necessitated an amendment of the bylaws, and section 1, article 4, will be changed to admit the word "manufacturers." This is a proposition which has come up many times before, and which has always met defeat. There has always been a disposition to limit the membership strictly to the practical roofer, but it has been deemed advisable to admit manufacturers on an even footing so as to secure their co-operation and support. This will undoubtedly do much toward the upbuilding of the association. It will be far-reaching in its influence and will no doubt result in a large increase in membership, as invitations will be sent to all the manufacturers in the United States, inviting them to become members and asking them for their assistance.

Another very important decision made at this meet-

ing by the association was to have a fire test at the next annual convention.

The scope of this test will in all probability be decided by the insurance commissioners and others who are interested and cooperating with the executive committee of the association. The plans and specifications for the test will be formulated in a few months. The cooperation of all those interested will be asked. The representatives of various railroad companies will also be invited, and, in fact, a general invitation will be issued to contractors and builders, as the test will prove interesting and instructive to a vast number of people. For this reason the next meeting of the association will no doubt be held in some large city, as near the center of the country as possible. The time and place of the meeting are left to the executive board, composed of the president, first and second vice-president, secretary and treasurer, and three directors.

The election of officers developed some surprises. P. LeGoullon of Pittsburg, Pa., was elected president. Mr. LeGoullon is one of the oldest members of the association and one of the most active. His counsel and advice have been sought at all times, and he has served the association faithfully and well. His election to the presidency was a tribute to his worth and a fitting testimonial to his ability. It is safe to predict that the association's affairs will prosper under his guidance. He is the president of the State Roofing Association of Pittsburg, and is held in high honor in his own town, where he is one of the leading roofers.

Mr. S. L. Foster, president of the Foster & Sons Company of Norfolk, Va., was elected first vice president. Mr. Foster has been in the roofing business for the past four years and is one of the best known roofers in Norfolk. He has been very successful both as a roofer and as a concrete contractor. He was born in New Jersey and lived for five years in Philadelphia. He understands his business thoroughly and will no doubt prove a strong acquisition to the official family of the association.

Henry Smithers of Indianapolis was reelected second vice-president.

C. A. Monks, Louisville, Ky., who served the association so faithfully during the past year as president, was prevailed upon to accept the office of secretary and treasurer. Mr. Monks is highly enthusiastic over the association's affairs and will in all probability infuse new life into the association.

E. C. Bortel of Philadelphia, E. Machwirth of Buffalo and William K. Thomas of Chicago, the retiring secretary, were elected directors for the ensuing year.

The standing committees will be appointed by the president during the next two weeks.

The members of the association were very extensively entertained during their stay in Norfolk. They made several trips to the Jamestown Exposition, to Old Point Comfort, Jamestown Island, and numerous other points of interest adjacent.

Among the ladies present at the convention were: Mrs. Wm. K. Thomas of Chicago, Mrs. Louisa D. Bauersmith of Pittsburg, Mrs. Anna L. Meyer of Sharpsburg, Mrs. Lucetta LeGoullon of Sharpsburg, Miss Lillian Meyer of Sharpsburg, Mrs. P. LeGoullon of Pittsburg.

Mr. Benj. Foster of the Genasco Roofing Company read the following statement to the convention:

As you are aware, the use of Trinidad Lake asphalt up until two years since was gradually becoming obsolete, more expressly because the sale of Trinidad Lake asphalt was in the hands of people who were not desirous of furthering the interests of this material. Five years ago the Barber Asphalt Paving Company organized the Genasco Roofing Company to endeavor to resurrect the use of this material, and up to the present time by the use of a strenuous business and advertising campaign we have increased the volume of asphalt for roofing purposes five fold.

The policy of the Barber Asphalt Paving Company is to sell to any reputable roofers in the United States Genasco Trinidad Lake asphalt roofing products. As far as the Genasco Roofing Company is concerned the Barber Asphalt Paving Company plays no favorite with them. They are obliged to pay the Barber Asphalt Paving Company the same price for roofing material that we charge outside concerns, and are expected to return a profit on the use of this material.

We understand that the National Association of Master Composition Roofers have no objections to using genuine asphalt for roofing purposes, and as long as every one is treated alike they should, in our opinion, be interested in the use of this material.

We play no favorite and ask that only a square deal be given to us in our endeavor to have the material used.

We understand that certain kinds of asphalt material are given into the hands of an individual in each city wherever this can be done, and that to him and him alone the privilege is extended to use the material. We, ourselves, do not believe in this sort of policy. We believe in selling the goods to any concern who can pay for them at a one-price proposition.

The Genasco Roofing Company, which is organized throughout the United States, as you know, is not bidding low prices. Our company is doing everything it possibly can to relieve the low-price situation, and trust that in many instances they be of considerable help in this direction. We believe that one of the great evils in the roofing business is the fact that producers of coal tar products are willing to sell irresponsible roofing concerns material on long credit and to irresponsible people without regard to when they will secure payment for their goods.

In shaping our policy we have refused to sell anything or anybody except the very highest class trade throughout the country, and by so doing we should in a way help to put the business in the hands of reputable concerns who will ask a fair profit on their work, which they are entitled to. On the other hand, if credit is given to irresponsible people they will take the work for any kind of figure that will suggest itself.

### Composition Roofs Called For.

SIoux CITY, IOWA.—Brewing plant for the Interstate Brewing Company, to consist of stock, brew mill, boiler and bottling houses. Cost, \$200,000. Architect Bernard Barthel, 79 Dearborn Street, Chicago, is preparing plans. Owners will receive bids.

BRAINEED, MINN.—Brewing plant for the Brainerd Brewing Company. Architect, Bernard Barthel, 79 Dearborn Street, Chicago. Owners will receive bids.

GRAND HAVEN, MICH.—Foundry building, 70x100 feet, for the Challenge Manufacturing Company. Architect, M. J. Morehouse, 277 Dearborn Street, Chicago.

MARQUETTE, MICH.—Stable and garage, 40x80 feet, for L. G. Kaufman. Architect, John D. Chubb, 112 Clark Street, Chicago.

WEST HOBOKEN, N. J.—Factory building, 100x100 feet, for the German American Fur Dyeing Company. Slag roof. Architects, Van Vleck & Goldsmith, 111 Fifth Avenue, Chicago.

ARVERNE, L. I.—Store and apartment building, 73x102 feet, for Mr. Chubbuck. Slag roof. Architect William F. Kemble, 112 West Forty-second Street, New York, is preparing plans and will receive bids about September 23.

CAPE GIRARDEAU, MO.—Hotel building for J. W. Phillips and others. Architect, J. B. Legg, Missouri Trust Building, St. Louis, Mo. Bids will be received about October 24.

ASHLAND, WIS.—Brewing plant for the Ashland Brewing Company, to cost \$120,000. Architect Bernard Barthel, 79 Dearborn Street, Chicago, is preparing plans. Bids will be received as soon as plans are completed.

YANKTON, S. D.—Brewing plant for the Swenk-Barth Brewing Company, to cost \$40,000. Architect Bernard Barthel, 79 Dearborn Street, Chicago, is preparing plans and will receive bids as soon as plans are completed.

PAWNEE CITY, NEB.—Library building, 27x44 feet, for the Library Board. Architects, Eisentraut, Colby & Pottenger, Scaritt Building, Kansas City, Mo.

AKRON, OHIO.—School building, 75x120 feet, for the Board of Education, J. F. Barnhart, clerk, to cost \$80,000. Architects Harpster & Bliss, Central Savings and Trust Building, will revise plans and new bids will be received in about twenty-five days.

MOUNDSVILLE, W. VA.—Bank, store and theater building, 84x105 feet, for H. W. Hunter. Architects Franzheim & Klieves, 1219 Chaplin Street, are preparing plans and will receive bids about October 5.

SPRINGFIELD, ILL.—Lodge building, 50x150 feet, for the Masonic bodies of Springfield. Gravel roof. Architect, John I. Rinaker, 44 Franklin Building.

STROUDSBURG, PA.—Machine shop, 50x100 feet, for the Stroudsburg Engine Company. Slag roof. Address owner.

LANGHORNE, PA.—Power house for C. J. Matthews & Co. Architects, Ballinger & Perrot, 1200 Chestnut Street, Philadelphia.

HAMILTON, OHIO.—High school building, 80x194 feet, for the Board of Education, John A. Keller, clerk, to cost \$50,000. Architect, George W. Ashby, Medinah Building, Chicago, and Associate Architect, George W. Barkman, Hamilton, Ohio.

CARBONDALE, ILL.—School building for the State Normal School, Dr. B. B. Parkinson, president. Architect, W. Carby Zimmerman, 17 Van Buren Street, Chicago.

EVANSTON, ILL.—Addition, 50x70 feet, to storage building for the North Shore Fireproof Storage Company. Gravel roof. Architect F. W. L. Fehring, 36 La Salle Street, will receive bids after September 23.

BRIGHTON PARK, ILL.—Flat building, 25x57 feet, for Philip H. Schuster, 1590 Thirty-fifth Street, Chicago. Architect, Arthur W. Cole, 204 Dearborn Street, Chicago. Bids will be received by owner.

PENSACOLA, FLA.—Bank and office building, 60x90 feet, for the American National Bank, to cost \$200,000. Architects Carpenter, Blair & Gould, 475 Fifth Avenue, New York, are preparing plans and will receive bids about October 1.

BUFFALO, N. Y.—Milk flour manufacturing plant, to include power house, storage plant, factory building, barn and company's house, and to cost \$100,000. Architects, Thompson & Frohling, 1 Union Square, New York.

WHEELING, W. VA.—Building, 125x105 feet, for the Young Men's Christian Association, A. C. Lynch, secretary. Architects Giesey & Faris, Schmulbach Building, are preparing plans and will probably receive bids late this fall.



## From Our Own Correspondents

### PHILADELPHIA.

PHILADELPHIA, Pa., Sept. 18.—After a short period of dulness in which unfortunately there was considerable price cutting, reports show a decided improvement in the cement situation. It is now realized that those who were wise enough to do their buying when figures were lower will in the near future have the advantage of those lacking this foresight. The car shortage is already being felt and there is no dodging the fact that prices are firmer. Those who have their warehouses stocked with cement will, therefore, be fortunate. Said the wise ones, "What will it benefit if you can buy cement 5 or 10 cents cheaper in a few months if you cannot get the stuff?" It is the man with the goods that will command the prices. The cry is coming in strong from nearly all railroad sections that the rolling stock is inadequate to the demand, consequently the buyer is urged to get in his goods as early as possible.

The William G. Hartranft Cement Company, 1114 Real Estate Trust Building, is very busy, but the rush demands of the Virginia Portland Cement Company, Phoenix Cement Company and the Buckhorn Portland Cement Company, of which they are the sole selling agents, have reduced their stock about twenty-five per cent, and William G. Hartranft fears, owing to another inevitable car famine this year, that those who may desire quick delivery later in the season will be greatly inconvenienced.

The Edison Portland Cement Company recently removed its local headquarters to larger and more commodious offices at 613A, Arcade Building. M. E. Meyer, manager, is at present in New York, but it is plainly evident that the company has no reason to quarrel with present trade conditions. They are receiving many orders and report mills active.

The Alpha Portland Cement Company, 909 and 910 Harrison Building, Henry Longcope manager, reports mills running steadily and business much improved. Mr. Longcope realizes that the man who carries a good stock of cement this fall, when the impending car shortage must be faced, is to be congratulated.

The Lawrence Cement Company, 616 Harrison Building, L. V. Clark manager, is pleased with the outlook. They are receiving many inquiries and good orders are coming in.

Ballinger & Perrot have awarded to Moore & Co., Inc., a contract to erect on the site of the old Quaker burial ground, on Fifth Street below Locust, a store, factory and warehouse building for the Locust Realty Company. This building will be constructed wholly of reinforced concrete and will be the largest of that construction in the city. It will be five stories high, with a basement, and will measure 116 by 189 feet. It will contain two tower fire escapes and one brick-enclosed stairway, in which will be situated an electric passenger elevator. There will also be a large electric freight elevator inclosed in brick walls in the center of the building.

The Roebeling Contracting Company was granted a permit to lay fireproof floors in the building of the Polyclinic Hospital on the north side of Naudain Street, west of Eighteenth. The cost will be \$5,500.

The new concrete bridge over the Philadelphia, Baltimore and Washington Railroad at Fifty-eighth Street is nearing completion. Owing to the low level of the surrounding territory the grading necessary to give access to the bridge approaches from other streets will be considerable. This work will be pushed as soon as practicable. The Highway Bureau has \$150,000 available.

The commandant at the Frankford Arsenal, this city, has invited estimates for brick, cement and macadam paving on several of the roads in the arsenal inclosure.

Thomas Little & Son have been awarded the contract to build two three-story stone and cement plaster dwellings and a two-story stone and cement plaster stable at Villanova for the Villanova Company. The total cost will be \$29,000. Bailey & Bassett are the architects.

The Frank H. Flier Company of this city will erect a large addition to their Canadian plant at Toronto. The plans, on which the William Steele & Sons' Company is taking estimates, provide for a two-story and basement concrete factory, 45 by 150 feet, and a two-

story storage building, 46 by 100 feet. The cost will be upward of \$400,000.

Plans were filed on September 6 for a three-story woodworking factory building to be erected for the Frederick R. Gery Company at Peltz Street and Schuylkill Avenue. The building will cover an area of 49.9 by 94.6 feet and will be built along the lines of cotton mill construction. The materials will be brick, stone and concrete. Henry J. Blauvelt is the architect.

Stacey Reeves & Sons and Jacob Myers & Sons are estimating on plans for a six-story and basement hospital building and a two-story building for surgical operations, to be erected for the Women's Medical College of Pennsylvania, on the north side of North College Avenue near Twenty-second Street. The buildings will cover an area measuring 74.6 by 87.4 feet, and will be of fireproof construction, with a framework of structural steel, brick and terra cotta. Janssen & Abbott of Pittsburgh are the architects.

### NEW CORPORATIONS.

The Kinzua Valley Paving Block Company, to deal in paving blocks, capital \$200,000, filed articles of incorporation in Camden, N. J., on September 13. The incorporators are Mathias A. Madison and Clarence D. Lamb of Kushogua, McKean County, Pa.

The Eastwick Plaster Company, Wilmington, Del., to manufacture plaster of paris, etc., was chartered on September 2; capitalized at \$100,000.

The New Jersey Contracting and Construction Company, capital \$10,000, filed articles of incorporation in Camden, N. J., on September 7. Incorporators are Harry M. Young, John Blowe and Eugene Verga.

The Aimes Asphalt Company, Wilmington, Del., was incorporated on September 12. Capitalized at \$100,000.

The Spring Garden Brick Company, capital \$100,000, filed articles of incorporation in Camden, N. J., on August 25, with Clinton D. Frey, Israel Frey, Elmer E. Frey and Wilfred B. Walcott as incorporators.

### BUFFALO, N. Y.

BUFFALO, Sept. 17.—A complaint has been filed with the New York State Public Service Commission by the Buffalo Paragon Wall Plaster Company against the New York Central Railroad Company. It is claimed that the railroad has failed to build a switch or sidetrack for the plaster works on the Belt Line. The company has asked that the railroad be ordered to discontinue the alleged charging of as great a compensation for a shorter as for a longer haul.

It is reported that Bailey, Johnson & Saunders, Buffalo contractors, have given up the contracts for building state roads in Tompkins County, N. Y.

A cement building, 200 by 36 feet, will be built at Friendship, N. Y., by the Eclipse Cream Separator Company, which has moved to that village from Erie, Pa.

The Welland Concrete Company of Welland, Can., located a few miles from Buffalo, have put a switch into their pit and are now installing a steam shovel with a capacity of loading ten cars of sand and gravel a day. It is said the company will begin at once to make extensive shipments.

Representatives from the New York State unions of the International Bricklayers and Stonemasons' Union recently met in Buffalo and elected the following officers: President, James J. Fox, Rochester; first vice-president, Joseph Feeney, Syracuse; second vice-president, Lewis Maher, Tarrytown, N. Y.; third vice-president, John V. Mackey, Buffalo; secretary and treasurer, Robert Bell, Auburn. The next State convention will be held in Schenectady, N. Y.

According to the books of the Building Inspector of Schenectady, N. Y., the number of building permits issued in that city between January 1 and August 1 was 464, a big increase over the same period last year.

J. Y. McClintock, County Engineer of Rochester, N. Y., has prepared plans for the construction of a new bridge over the Oatka Creek in Le Roy, N. Y. The plan shows a concrete structure with several arches. There will be one main arch under which the water will pass. The other arches will be merely for effect and will show only on the south side.

Official reports show that the building operations in Rochester, N. Y., last month were nearly twice as great as those of the corresponding month last year. The total in August, 1907, was \$904,130, as compared with \$480,658 for August, 1906. The total value of the Rochester buildings for which permits were granted for the first seven months of this year was \$5,368,250, while for the same period in 1906 the total was \$4,276,214, showing an increase for the first seven months of the present year of more than a million dollars.

### GREATER NEW YORK.

NEW YORK, Sept. 18.—The prospect here for a good fall trade among the cement dealers is improving each day. Dealers seem to think that the money market is opening up and business will soon resume as before.

There is a flurry in the building trade, in the upper East Side, where a large number of apartment houses have been standing incomplete for the last year. These have been bought up by substantial realty concerns, after satisfying the builders' liens, and will be completed at once.

The biggest boom in the whole situation, which many believe will stimulate enough trade to pull all dealers through the fall with a larger business than last year, is in Long Island and Brooklyn, where a large number of apartments and buildings of all classes are being erected. Outside of Brooklyn, on Long Island, where the Long Island Real Estate Exchange holds forth, any number of private residences and cottages are being erected. Here is where the cement men will come in for their share of the boom—that is, if the percentage of increase in the amount of cement-constructed houses still holds good and if the architects' reports that the bulk of their work is coming from that section be true.

Oren E. Perry, sales manager of the Rockland Rockport Lime Company, in the Fuller Building, reports everything "lovely," as he puts it, and prospects are equally good. Mr. Huke, one of the outside gentlemen attached to the same office, is a very busy man these days. If you don't believe it, just try to catch him in the office some day.

The Consolidated Rosendale Cement Company, 26 Cortland Street, for which Mr. Stranahan is sales manager, has recently issued a most attractive publication exemplifying the tendency of the times in commercial literature not only to present the argument concerning the product, but to do so in an artistic form. Engineers, architects and builders will find the publication fully up to the highest requirements of art, combined with a plain commercial argument in favor of its product. Mr. Stranahan says: "Sales conditions are picking up in New York."

E. Meyer, the general sales manager of the Edison Portland Cement Company, 1133 Broadway, New York, says: "The sales of the company during the summer and up to the present have been very good and the outlook appears exceedingly promising." The mills of the company, situated near South Orange, N. J., are turning out about 8,000 barrels. Last year the company received one of the largest single orders given out, comprising 75,000 barrels from the Edison Electric Company.

The Edison Cement Company is a new concern when it comes to competing for New York trade, though it has been in the national field some time and it looks as if they will get the business.

W. B. Corbett, New York manager of the Olsen's Portland Cement Company, 45 Broadway, says business is very good with Olsen's despite the lull in the sister trades and he expects it to continue.

H. C. Miller & Co., specialists in reinforced concrete, 1 Madison Avenue, New York, are doing a good business, so Mr. Asher Atkinson says. Among the large operations for which the company are furnishing the corrugated reinforcing bars manufactured by the St. Louis Expanded Metal Company is the Colgate Building at Jersey City, N. J. Thompson & Starrett are the contractors, J. A. Fields of Newark, N. J., the architect. Another is the large machine shops of the Delaware, Lackawanna & Western Railroad at Scranton, Pa.

Ernest R. Ackerman, president of the Lawrence Cement Company, returned from Europe last Friday after an absence of six weeks.

Mr. White, manager of the General Fireproofing Company of 156 Fifth Avenue, New York, reports business good and on the increase all the time. The company are the originators and manufacturers of the patented lug bar for reinforcing concrete besides expanded metal and numerous other fireproofing devices and materials.

Mr. Watson of the Concrete Engineering Company, Brunswick Building, Twenty-sixth Street and Fifth Avenue, New York, is back at his desk after spending a short vacation in the wilds of Vermont. He says things are beginning to pick up all along the line, though the new work of any large magnitude which is now coming in will no doubt be held over until next spring. This, he explains, is due to the difficulty of obtaining labor and the cost of material at this time.

The American Gypsum Company, of which John A. Kling, president of the Cleveland Builders' Supply Company, is also the head, has increased its capital from \$100,000 to \$150,000. Mr. Kling announces that the money will be used in increasing the capacity of the mammoth plaster mill at Port Clinton, which is said to be the largest in the world.

Architect Gleichman has announced that a company will build a five-story concrete hotel adjoining the West Side Majestic Theater, which was opened a few weeks ago and which is having great success as a playhouse. The theater is largely of concrete, the gallery being one solid block. The boxes are the same. The new hotel will be gone on with as soon as plans can be prepared.

B. F. Keith has completed arrangements for a 99-year lease on a Euclid Avenue site near the Union Club and will erect a \$1,000,000 theater at once. According to the building code it must be fireproof. It is not known yet who will be the architect for the new playhouse.

The brick plant of George H. Gynn, which was destroyed by fire, has been rebuilt at a cost of \$30,000. It is operated by electricity.

A new kiln and four tunnels have been added to the capacity of the Metropolitan paving brick plant in Newburg.

The Farr Brick Company is preparing to spend about \$20,000 this fall and winter for new machinery. The company's plant is at 125 Reeves Avenue, Newburg. A new brick machine, a dryer and a kiln are to be added.

The Ohio Clay Company, makers of hollow brick and fireproofing tile, announce that they will double the capacity of their plant this winter. Definite arrangements for equipment have not been made yet, owing to the pressure of business.

A new Zoo building is to be built in Brookside Park. It is not expected by Park Engineer Stinchcomb, who has the work in charge, that the structure will be started much before next spring. It is to be built almost entirely of cement, with brick facings. The sanitary value of cement is realized in a structure of this kind, and concrete will be used to the exclusion of other building materials.

Another big job under way by the city authorities is a new \$70,000 contagious hospital which will be erected on the City Hospital grounds. It also will be largely of concrete, as it will be necessary to keep it constantly disinfected. The corners will all be rounded so no germs may lurk there. H. R. Cooley, director of public charities, is supervising the work. It is expected that bids will be let in a short time.

The Cleveland Club, a West Side organization, has announced that it will soon erect a spacious new fireproof clubhouse on the West Side, near the market-house. There will be the usual club rooms, with a gymnasium, pool rooms and bowling alleys. H. G. Mansfield is president of the organization.

A contract for 3,000,000 shale brick was closed during the past month through the office of the Masons' Supply Company. The Forest City Brick Company will supply them to the Reaugh Construction Company, which concern will use them in their sewer contracts. The Masons' Supply Company is also supplying 4,000 barrels of Crescent cement for the construction of another Bradley block at West Third Street and Noble Court. Some 55,000 pressed Canton brick will be used in the same contract.

Extensive repairs are being made at the different plants of the Deckman-Duty Brick Company here. At the Malvern (Ohio) plant two new boilers, with a capacity of 225 horsepower each, have been installed in a new boiler-house. At the Collinwood plant a nine-foot blower and six tunnels have been added to the drying capacity. Improvements have also been made on the company's Carrollton plant.

The fine old residence on Euclid Avenue owned by the notorious Cassie Chadwick has been sold and the announcement made that it will be used as a site for a new Jewish synagogue to be built next year for the Anshe Chesed congregation, of which I. Levy is president and S. Fishel a leading trustee. The new temple will cost about half a million and will be elaborately finished.

The plant of the Cleveland Trinidad Asphalt Paving Company was closed down for several weeks during the past month on the order of Health Officer Friedrich, who claimed that the crushing of stone sent out a fine dust which created a great nuisance in the neighborhood. The plant was reopened without permission and a number of employees were arrested. After their release they left for Detroit, having been engaged to work on the municipal asphalt plant in that city to take the place of strikers. Dust collectors have been placed on the local plant and it is once more operating.

The Cleveland Concrete Building Block Company is having good business results this year. The latest contract closed is for a handsome garage for A. St. J. Newberry at Carnegie Avenue and East Forty-sixth

Street, to cost about \$2,000. Charles C. Chopp, purchasing agent for the F. Glidden Varnish Company, is having a new summer home built at Dover Bay of concrete blocks and tile. The blocks are being furnished by the Cuyahoga Concrete Stone Company.

Plans are also being prepared by Architect Barnum for another new building, to be known as the John Hay High School. It is to be ready for occupancy in September, 1908, at a cost of \$225,000. It will have accommodations for 1,000 pupils. The purely classic form of architecture will be modified to suit conditions.

The Reinforced Concrete Construction Company, 1025 Oregon Avenue, this city, has secured the general contract for a new factory building for Joseph Feiss, on the West Side. It will be 150 by 250 feet and two stories high, with a saw-tooth roof. There will be 75,000 square feet of concrete work in the structure, the walls being of brick. The contract is worth about \$100,000. Work has already begun on the job.

The Cleveland Asbestos Plaster Company reports a good month's business. One of the best contracts secured was the plaster work for the new county infirmary at Canton, Ohio. Two carloads of asbestos plaster will be used. The plaster for the new Record Memorial at Conneaut will also be supplied. The memorial is being built in connection with the First Congregational Church of Conneaut by George J. Record and will be used as a Sunday-school building. It will cost nearly \$40,000.

On September 16 the Carey Construction Company of this city closed a contract for a big concrete job—a new school house for the Sacred Heart of Mary Parish in South Brooklyn, at a cost of \$60,000. The building will be 64 by 98 feet and three stories high. Concrete floors and pillars will be used, the walls being faced with brick. A slate roof is specified. Work will be gone on with at once.

J. Lightbody of Youngstown has been given the contract by the city of Sandusky for a new concrete filtering plant. His bid was \$74,600, just a little bit lower than the Carey Construction Company of this city, whose bid was \$75,000. The concrete feature of this work calls for the expenditure of about \$50,000, the balance being for machinery.

## SYRACUSE, N. Y.

SYRACUSE, N. Y., Sept. 20.—Building this year in Syracuse and vicinity has been considerably heavier than last year, although in August and September there was a falling off. At the end of May building permits had been granted by the Syracuse Superintendent of Building for \$815,000 more than for the corresponding period last year. At the end of August this year's lead was decreased, but the total still remains about \$500,000 more than 1906.

Syracuse building trades men, including manufacturers and jobbers, had a good representation in the commercial float parade of the Ka-noo-no Carnival held here during the week of September 9-14. The float that won first prize in that division was that of Henry Funda, the builder, who had a complete model house drawn on a truck by four horses. The second prize was captured by the Paragon Plaster Company, which had an elaborate float drawn by six horses wearing white blankets, each horse being led by a groom and illuminated by red fire. Various ways were taken to represent the industry, and prominently displayed were the sand-lime brick and concrete blocks manufactured by the company. On a map of the world a man was represented as spreading plaster. In the same division C. J. Sullivan had a section of a wall on a truck, showing how he makes houses out of his cement blocks. George W. Raek & Son had two floats, each being drawn by four horses led by colored grooms. Bags of cement and other building material were shown to the best advantage. Altogether sixty floats were in line, representing almost every large industry in Syracuse.

George W. Pack, who was injured by being run into by an engine, is able to be at his office again. For some time his life was despaired of.

Hill & Van Wagenen have had a successful season, especially in sidewalk work.

The contract for the longest distance on the barge canal, for the work extending from Oneida Lake, near Syracuse, westerly to the Mosquito Point bridge, has been let by the State to Stewart, Kerbaugh & Stanley Company of New York at \$3,395,706. The contract covers forty-three miles. The bid was \$300,000 in excess of the estimate of the engineer.

Humphries & Stafford of McGraw have the contract for building a new hotel of cement blocks at that place.

C. J. Sullivan has the contract for building the concrete abutments for bridges on the work of double-tracking the R. W. & O. railroad from Syracuse to Liverpool.

## CHICAGO.

CHICAGO, Sept. 21.—The fall business is opening up in good shape and things this month are considerably better than they were last month at this time. The material people report that there is a larger demand for materials and prices are somewhat improved. There are as yet no large jobs in sight for fall building, but the sentiment of manufacturers is against large jobs on account of the close price at which materials have to be sold in order to get the contract. One notable feature that is rapidly developing is the fact that the manufacturers are giving more attention to the country trade and the small dealer, who is the recognized distributor of materials to the consumer. A more satisfactory trade can be developed, and the manufacturers are realizing this. It means more money in their pockets as well as to the dealer.

### Building of City Hall Postponed.

According to the mayor and Commissioner Hanberg the money for the new city hall is not in sight, and as there are more pressing needs for the available funds, such as additional sewerage system and other improvements necessary to the growth of the city, it has been practically agreed that the present unsightly building will have to accommodate the municipal offices a while longer.

Architect Paul Gerhardt is at work preparing plans for a large warehouse on the West Side. It is to be two stories high, 268 by 125 feet, partly of concrete, and will cost \$125,000.

The Republic Metalware Company are about to erect a large warehouse at 1332 Wabash Avenue. It is to be six stories high, 65 by 170 feet, of brick and concrete, and to cost \$125,000. The architect in charge is L. G. Hallberg, 84 La Salle Street.

### With the Machinery Men.

"The number of crushers we have sold so far this year has already equaled the total amount of our sales for the entire year of 1906," said Sales Manager Moats of the Austin Machinery Company. "The railroads have not ordered as much crushing and grading machinery as heretofore, but the stone plants have more than made up for the loss in this line. We have just shipped a No. 7½ and two No. 4 Austin crushers, including elevators, screens and hoists, to the Alabama Stone Company, Russellville, Ala. We have also shipped a complete No. 5 plant to the Farmland Stone Company, Farmland, Ind. Our Cuba agent was low bidder on specifications issued by the government of Cuba for six complete No. 3 plants, including engines, boilers and equipment."

The Williams Patent Crusher and Pulverizer Company report that they have had a large number of sales of their crusher to cement plants recently. All the users of the Williams grinders are more than pleased with the results they get. The Superior Portland Cement Company, of Seattle, Wash., have placed an order for another Williams grinder in addition to the two they now have.

The Contractors' Supply and Equipment Company are doing a big business with all their specialties. One recent order was for a Smith concrete mixer to be shipped to India.

L. J. Hewes, Chicago manager of the Power and Machinery Company, has recently returned from a trip through the West, where this company has been erecting several crushing plants. He has recently secured an order for a No. 7½ McCully crusher engine and complete equipment sold to the U. S. Fidelity and Guaranty Company, of Cody, Wyo., for the Schosho dam.

### New Crusher Operations.

The Artesian Stone and Lime Works have now got their plant at Summit, Ill., in operation, though it is not yet complete. This is the largest crushing plant in this vicinity, and the second owned and operated by this company.

Chicago Union Lime Works will start their other plant at Summit in the course of the next ten days. They have had a No. 8, two No. 5 McCully crushers, and have ordered two more No. 3's, which will be installed immediately.

The Marble Head Lime Company report that the lime business is good. Their hydrating plant is giving excellent satisfaction. This plant is one of the first in the West to hydrate high calcium lime, and the tests of the material for commercial purposes have been satisfactory.

### Sand, Lime, Brick Business Good.

J. J. Maroney of the American Sand Lime Brick Company said that business was good with his company. They have several large orders for machinery for sand lime brick plants, and, judging from the amount of new plants being started, the business is on the boom.



## THE TWIN CITIES.

MINNEAPOLIS, MINN., Sept. 14.—The building season has slackened up perceptibly and there is far less than formerly to report in the line of construction. The work in hand includes a great deal which is yet uncompleted, so there is no particular surplus of laborers, but the summer rush is over and the fall season is yet to start in. There is some talk of considerable new work which is in prospect, but much of it is tentative and may or may not be actually taken up this fall. Complaint is made of the high prices generally ranging on building materials and labor, but the complaints are not because of any alleged irregularity in prices, it being generally recognized that the conditions justify the present prices.

## FLOUR CITY BUILDING.

The American Type Founders' Company will have a building erected on Fourth Street, near Fourth Avenue South, to be three stories and deep basement, sand mold brick walls and reinforced concrete interior construction, Turner mushroom system. It will cost about \$40,000.

The H. N. Leighton Company has work under way on the superstructure of the flour mills for the Russell-Miller Milling Company in Southeast Minneapolis. The buildings will be of reinforced concrete construction and will cost complete about \$150,000.

Rev. E. A. Skogsbergh has had plans prepared for a modern brick and reinforced concrete residence to be erected at Eighteenth Street and Portland Avenue, to cost about \$10,000.

The McDonald Engineering Company of Chicago has the general contract for the erection of the new factory for the International Sugar Feed Company at Fourteenth Avenue Southeast and Roland Street. It will be of reinforced concrete construction, costing \$50,000.

The J. & W. A. Elliott Company received the general contract for the erection of the new Augsburg Publishing House for the United Lutheran Church. It will be of fireproof construction throughout. Cost, \$65,000.

W. H. Donahue will erect a brick apartment building at Irving Avenue and Lake Street, on plans by Lindstrom & Almars, architects. It will be 48x65, two-story. Cost, \$15,000.

A. L. Dorr, architect, has plans for a modern warehouse for Forman, Ford & Co., wholesale glass and paints, to be erected on Second Street, between First and Second Avenue South. It will be of modern construction, John Wunder having the general contract.

Theodore F. Curtis, proprietor of Curtis Court, proposes to build a four-story addition, 50x110, to the building. He also plans to erect several small hotels at different points in the city. The whole work will represent about \$500,000.

## PITTSBURG AND VICINITY.

PITTSBURG, PA., Sept. 13.—The approach of fall, which means that winter will soon put a stop to a large amount of concrete work that is now under contract, has proven a stimulus to the industry in this section and every effort is being made to rush all work possible to completion before the bad weather sets in. There has been more concrete construction in the Pittsburgh district this summer than ever before in its history and the projects, as a rule, have been of much larger size. It is estimated in authoritative circles that there is at least 50 per cent more work under actual construction now than there was at this time last September.

H. A. McMore, for several years past well known as a member of the engineering staff of the Harlem Contracting Company of New York City, has resigned to accept a position in the estimating and designing departments of the General Fireproofing Company of Youngstown, O., where his general headquarters will now be.

It is probable, according to the announcements of the Lake Erie & Ohio River Ship Canal Company, Frick Building, Pittsburgh, that contracts for the construction of this immense \$50,000,000 project will be awarded some time during the coming fall or winter and that the actual work of construction will be started in the spring as early as the weather will permit. This work will include the largest concrete contracts that have ever been awarded in the Pittsburgh district, it being estimated from the present plans of the engineering department that there will be over 600,000 cubic yards of concrete and reinforced concrete used in the construction of the locks, retaining walls and bridges necessary for the canal, which will be over 100 miles in length and will connect the Ohio river with Lake Erie, giving a

direct water route from the ore beds of Michigan to the iron and steel works of Pittsburgh and vicinity.

The Pittsburgh Concrete Machinery Company is being formed in Pittsburgh and will act as manufacturers' agents for concrete machinery of all kinds, including mixers, block and brick machines, reinforcement bars, curbing tools, barrows, etc. Only first-class lines will be handled and appliances that have stood general usage and tests. Manufacturers desiring such representation are requested to address the secretary of the company, George D. Steele, at the offices of the company, Commonwealth Building, rooms 1410-12. The other parties behind the movement are W. S. Steele, J. A. Thomas and Arthur D. Jones.

William Sprague, City Engineer, Pittsburgh, Pa., is ready for bids for the construction of a retaining wall that will cost about \$8,000, and which will be built on Wissin Street, South Side, Pittsburgh. He is also preparing plans for the new \$200,000 bridge that will be built in Bloomfield, Pittsburgh, which will require a large amount of concrete masonry, the plans calling for abutments, wingwalls and piers of this material.

The sewer committee of Phillipsburg, Pa., Jordan Shaffer, chairman, will shortly be ready for bids for the construction of several large reinforced concrete storm sewers. They will not be built until next spring, however, as the appropriations for this year have all been used.

George Feick of Oberlin, O., has been awarded the contract for the erection of the brick and concrete chapel to be built this fall at Oberlin College. All columns, girders, trusses, floors, gables and the roof will be constructed of reinforced concrete. The proposed structure will be but one story in height, 110x162 feet in size and will be the first building of the kind in Oberlin. It was designed in New York City by Cass Gilbert, whose system of reinforcement will be used throughout.

George Lieber, City Clerk, Bellevue, O., is ready for bids for the construction of concrete banks at reservoirs Nos. 1 and 2 at the water plant in that city. The work will be done this fall.

The construction on the new sewage disposal plant for the city of Allegheny, which was recently authorized by the council of that city, will be started this fall and continued as far through the winter as practicable with the safety of such a project. The septic concrete and reinforced concrete and the plant will tanks and the settling basins will be constructed of of the United States Government that sewage must be modern in every particular.

The contract for the construction of the new electric street railway line between Johnstown and Ebensburg, Pa., has been awarded to Unbenhauer & Co. of Philadelphia. The road will be constructed for high speed and concrete will be an important factor in its construction, all the sub-structure masonry for the many bridges, together with the culverts, piers and abutments for trestles, etc., being planned according to the specifications of this material. None of the work will be subtle and the contractors will establish several concrete mixing plants along the line. The actual construction will commence at once and it is expected that in spite of the severe winters in the mountains it will be possible to prosecute it all winter. Although the distance is only about twenty miles, the road, on account of the extremely mountainous country, will cost approximately \$250,000.

Two concrete plants are being used in its construction, one being located on the shore and the other on a large flat near the river. Ransome mixers are being used, the concrete being placed in the molds by means of buckets conveyed from the mixing plant by means of steam hoists. The work will cost approximately \$100 per lineal foot.

Contracts will be awarded during the coming month for the erection of a number of concrete bridges and culverts in Belmont County, Ohio. The bids will be received and the awards made by the County Commissioners.

Plans are being prepared for the construction of a large storm sewer and a number of sections of reinforced concrete sewers for the new system now in course of construction at Canton, Ohio. W. E. Sarver is City Engineer and will receive all bids and award all contracts.

The contract for the construction of the concrete piers and abutments for the large bridge that will be built across McIntire Avenue, Patton, Pa., has been awarded to John D'Audea, of that city, at his bid of \$8 per cubic yard. There will be no reinforced work.

The contract for the construction of the new reinforced concrete church that is to be built at Glassport, Pa., by the Holy Cross Roman Catholic Church congregation of that city, has been awarded to the Hollman Company of that city. The plans for the structure were prepared by Titus DeBobola of Pitts-

burg and call for expanded metal and round and twisted steel bar reinforcement. The church will cost \$25,000.

The Masontown Cement Block Company of Masontown, Pa., have been organized and will build a modern plant for the manufacture of cement and concrete building blocks this winter, which will be placed in operation in the early spring. Ornamental shapes will also be manufactured.

## LOUISVILLE, KY.

LOUISVILLE, KY., Sept. 20.—The contract has been awarded to the National Concrete Construction Company for the Haldeman warehouse, to be built of reinforced concrete. Work has already been started and it will be pushed to completion as rapidly as possible.

The National Concrete Construction Company have also been awarded the contract for the construction of the reinforced wall to be erected on the Point, at the cut-off. It will cost in the neighborhood of \$50,000, and will be a retaining wall to prevent the high water flooding that section of the city. They

The Southern Roofing and Paving Company have noted a considerable improvement in their business during the past month and now have a number of nice orders for concrete work, including two grain elevators and considerable sidewalk work. They also report an increase in the roofing industry, and say that they are more actively engaged in this line than they have been all summer. C. A. Monks is at

The Johnson Concrete Construction Company, located in New Albany, Ind., just across the river, have all the work they can handle. They are just completing an office for their own use out of concrete blocks.

The Kosmos Portland Cement Company are finding the demand for their output fairly good. They are operating their mill at Kosmosdale, Ky., on full time.

J. B. Speed & Co. only report progress in the demand for their Portland cement, and Mr. Gray said that they were just as far behind in their orders as they had ever been. The demand for natural cement and lime was fairly good, though locally business was not so brisk as it might be.

The Utica Lime Company have had a very satisfactory business in the past month. They were agreeably surprised at the amount of business done. Mr. Wheat said that the cement business had surpassed their expectations, and that the lime industry was holding up well.

The Western Cement Company report that while the demand has not shown material increase it has not fallen off, and they take that as a good indication.

The Kentucky Wall Plaster Company have the same satisfactory report to make regarding their business. Both their plants are in full operation.

The New Albany Wall Plaster Company continue to be busy at their plant across the river. They have always enjoyed a nice demand for their output, and it is showing a steady increase.

The Kentucky Silica Company have noted an increase in the demand for sand within the past week.

## MEMPHIS AND THE SOUTHWEST.

MEMPHIS, TENN., Sept. 17.—The outlook in the supply business for the remainder of the autumn is fair. Business has been a little quiet the past fortnight. A number of small building projects are on hand in the city, but no large private contracts. The city of Memphis will have some important municipal work done soon by contract, including the paving with gravel of Florida Street from Virginia to Trigg Avenue, and the building of a bridge over the Bayou Gayosa on Madison Avenue. This bridge is to be of concrete reinforced on top of the old brick abutments. City Engineer J. H. Weatherford is looking after the work.

Steve Wright, of the Wright Lime and Cement Company, South Third Street, says that the autumn business is not very active. He is running about the same agencies on materials as heretofore and completed several large contracts in Memphis last month to supply building contractors.

The Union Sand and Material Company, Tennessee Trust Building, report an improved situation in the Mississippi River washed and screened sand and gravel trade. This concern is also doing a carload business of extensive character on "Red Ring" Portland cement, Red Diamond, Black lime and roofing gravel.

C. L. Weidensaul of Leona, Kan., is completing the cement blocks for several residence jobs at that place.

Ralph Walters has started a cement paving business at Milford, Kan., and is meeting with success.

### THE SUPERIOR PORTLAND CEMENT COMPANY.

#### A Large New Industry in Southern Ohio Now in Operation.

One of the most complete and up-to-date cement plants in the country recently sprang up in the southern part of the State of Ohio. The institution referred to is The Superior Portland Cement Company of Superior, Lawrence County, whose lands were formerly known as Center Furnace, near the boundary line of Elizabeth and Decatur Townships.

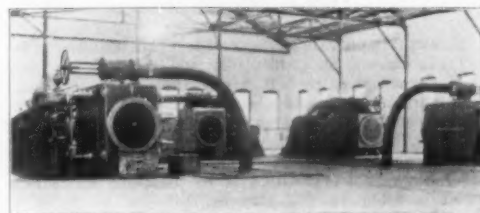
The company was incorporated under the laws of Ohio in April, 1906, with a capital stock of \$525,000, all paid in. The Center Furnace property, comprising a fine tract of land of about 9,000 acres in Lawrence and Scioto Counties, was purchased of Mrs. Nannie H. Kelly. This land is rich in limestone, clay, shale and coal. Soon after the purchase of this property by the Superior people steps were taken to establish a postoffice, and also to change the name of the little hamlet from Center Furnace to Superior. On March 6, 1907, commission was given and a post-office was established. Rural free delivery is now being made.

In July, 1906, ground was broken for what is now, in every sense of the word, a model of cement factory construction, neither pains nor money being spared to make this plant labor-saving throughout and one of the best in this progressive country. A

house, which will be completed by the time this number of ROCK PRODUCTS reaches its readers, is 100 by 350 feet, of reinforced cement construction. The sizes of the various buildings are: Raw material, 70 by 210 feet; kiln, 76 by 162 feet; clinker, 62 by 150 feet; coal, 50 by 140 feet; boiler, 45 by 120 feet; engine, 75 by 112 feet; crushing, 60 by 75 feet; machine shop, 40 by 60 feet.

The crushing plant is equipped with Mitchell cross-over dumps. The limestone is first dumped into a No. 9 Gates crusher and then goes through two No. 5 Gates crushers. The shale is dumped into a No. 9 American clay dry pan. Both the limestone and shale are conveyed 150 feet to two circular bins, the limestone bin being 20 feet in diameter and 45 feet high. The shale bin is 15 feet in diameter and 45 feet high. The limestone is then fed into two limestone dryers and the shale into one dryer by automatic feeders. These dryers are 5 feet in diameter and 60 feet long. The material is then conveyed to three F. L. Smidth kominuters, thence to six F. L. Smidth tube mills. From the tube mills the material is conveyed to large bins over the kilns. The kilns are 125 feet long and 7 feet 6 inches in diameter. The clinker is then conveyed to four Mosser vertical coolers, and after being cooled is conveyed to the clinker mill and sent through four Mosser pot crushers; then to ten Griffin mills, and is finished by three F. L. Smidth tube mills. From these mills the material is conveyed to a large stock house, the capacity of which is 300,000 barrels. The packing house is in the center of the stock house, on either side of which is a railroad track, making it very convenient for loading.

The power house consists of six batteries, 400-horsepower each, of Atlas water tube boilers and two 700-horsepower slow-speed Atlas Corliss engines, and two 400-horsepower direct connected Atlas engines.



VIEW IN ENGINE ROOM, SHOWING THE BIG STEAM TURBINES.

Frederick J. H. Merrill, geologist of New York City, has sent the company an extended report on the samples of raw materials submitted to him. The following paragraph is considered sufficient to thoroughly convince the most skeptical that the Superior Portland Cement Company has the raw material for producing one of the best grades of cement on the market: "From these analyses," Mr. Merrill says, "I am able to state that the samples submitted represent material in the highest degree suited to the manufacture of an excellent grade of Portland cement."

It has always been the experience of cement manufacturers that the product from lime and shale has been an off color, but the Superior Portland Cement Company guarantee that the color of their cement is equal to any manufactured in the Lehigh Valley of Pennsylvania or elsewhere. Manager J. B. John has had much experience in the manufacture of cement from limestone and shale, the only raw materials that will enter into the manufacture of cement in this operation.



THE GREAT MILL OF THE SUPERIOR PORTLAND CEMENT CO. AS COMPLETED.

PATH OF THE RAW MATERIAL FROM THE CRUSHER THROUGH THE DRYERS AND TO THE MILL.

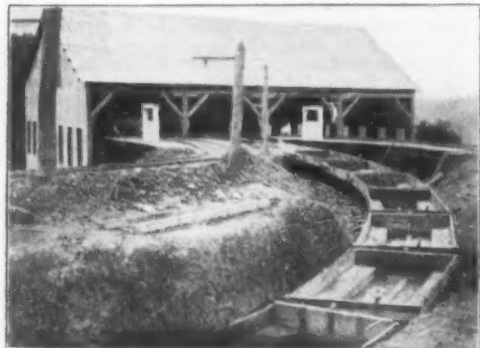
representative of Rock Products visited the plant, and with the aid of the camera is able to illustrate the buildings, machinery, etc., along with a pen picture of an enterprise which bids fair to be one grand, big success.

The plant is located on a spur of the Detroit, Toledo and Ironton Railroad, about one mile from the main track, and about eighteen miles from Ironton. This road intersects all the trunk lines east and west north of the Ohio River, and the plant, therefore, has good shipping facilities over three or four roads as well as river transportation. The buildings are substantial in every way, all being constructed of steel framework and galvanized sheeting, with the exception of the engine and boiler rooms, which have steel framework and brick for the outer walls. The floors of the entire plant are of concrete. The stock

The three stone dryers and one coal dryer, four kilns, four coolers and all conveying machinery were furnished by W. F. Mosser & Son of Allentown, Pa. All the elevating machinery was furnished by the Jeffrey Manufacturing Company of Columbus, Ohio. The power house is equipped throughout by the Atlas Engine Works of Indianapolis, Ind. All the machinery that has been installed in this plant has been well tested in the cement business and has been found successful. The coal is pulverized by Fuller mills. The steel work of the entire plant consists of about 700 tons of iron, which was made up and erected by the American Bridge Company of New York City. A well-equipped machine shop for the company's own use is in close proximity to the mill.

Water for the plant is furnished by three deep-driven wells, immediately under the boiler room, and a reservoir will soon be erected on the hill, thus having an elevation of 150 feet and being close to the plant. The company will use the Bates valve bag system in filling the bags, which assures the neatest and most substantial package. The capacity of the plant is 2,400 barrels per day.

The limestone deposit used by this company has been opened up in the side of the hill, and a great portion of the quarry is already stripped. When the stripping gets too heavy the limestone is mined. The limestone when mined has a thirty-foot vein of sand rock roof and all the limestone that is mined is very clean and free from high alumina clays or any other foreign matters which are injurious to the manufacture of cement. The shale stratum is about twenty feet thick and is opened up on the same hill as the limestone. It is loaded into tram cars by steam shovels. The company also has a good quality of No. 5 coal, which lies about thirty feet above the limestone. This gives the company all the raw materials, including coal, on their own property. The limestone, coal and shale are hauled to the crushing plant with a twelve-ton Goodman electric motor.



CARS OF RAW MATERIAL DRAWN BY ELECTRIC ENGINE FROM QUARRY TO CRUSHER.

The entire plant was designed by Mr. John and the buildings were erected under his personal supervision, as well as the placing of all machinery.

The company has a well-equipped laboratory, and the chief chemist, John Blank, formerly with the Lehigh Portland Cement Company, has had considerable experience in the manufacture of cement from limestone and shale. John Greenall of Allentown, Pa., who is well known in the cement world, having acted in the capacity of consulting engineer in some of the best plants in this country, is consulting engineer for this company. Eugene C. Switzer is his assistant. He was formerly with the New Castle Portland Cement Company of New Castle, Pa.

Raw material was first sent through the mill about August 20, and the first shipment of cement will be made September 16. The plant is employing only experienced cement men who have been in the business for a number of years. The plant will give employment to about three hundred men. The policy of The Superior Portland Cement Company will be to keep in close touch with the dealer, both by regular personal visits and by correspondence. The management has been very careful not to cover a larger field than it is able to care for properly and insure prompt shipments. Superior Cement has been received by the trade in a way most gratifying to this company, who will give the same courteous treatment to the small order as to the large. Orders have already been booked from the Middle West and Southern territories, also from Western Pennsylvania, Ohio, Indiana, Kentucky, Michigan, Illinois and West Virginia.

About two miles from Superior the company is operating limestone quarries, from which there are about one hundred and fifty tons shipped daily to Ironton, where it is used for fluxing purposes in furnaces in that city. The company also operate a charcoal furnace at Superior, which is producing about fifteen tons of first-class hot blast charcoal iron daily.



This furnace is one of the oldest in the country, being built in 1832, and is yet good for many years' service. Coal mines are being operated in connection with the cement plant for the company's exclusive use.

The personnel of The Superior Portland Cement Company shows that its means are almost unlimited and that its organization is so strong, and its management so complete, that failure to succeed will be out of the question. The president, Justus Collins, was among the pioneers in developing the Pocahontas and New River coal fields in West Virginia. Mr. Collins went to West Virginia about nineteen years ago from Alabama, of which State he is a native. He has been actively and successfully engaged in coal-mining since that time. He interested with himself in the development of the cement company Messrs. M. L. Sternberg of Jackson, Ohio; Eugene Zimmerman of Detroit, Mich.; Col. H. A. Marting, D. C. Davis and Mrs. Nannie H. Kelly of Ironton, Ohio, and B. H. Kroger of Cincinnati. These are the principal stockholders, although there are others who own a small number of shares.

Mr. Collins, president of the Superior Portland Cement Company, is one of the moneyed men of the Mountain State, and his ability as a leader in developing new industries is known throughout several States. He is a man of sterling worth and his influence with the manufacturing interests is always felt in any section where he may become interested. He is well known in financial circles of the Central States, and all business enterprises that he has been connected with have proven great successes.



M. L. STERNBERGER,  
Vice-President.

have been booked that insure great success for the company. Mr. Harwood is a man of sterling qualities and has the gift of making friends easily. He has already established a large circle of staunch friends for The Superior Portland Cement Company. Among the most prominent supply houses who will handle this company's cement are: Mason Supply Company, Cleveland, Ohio; Toledo Builders' Supply Company, Toledo, Ohio; Murray Bros., Allegheny and Pittsburgh (Pa.) District; Kyle & Dugan, Columbus, Ohio; Patterson-Murphy Company, Dayton, Ohio; Zanesville Grain and Builders' Supply Company, Zanesville, Ohio; R. O. Campbell Coal Company, Atlanta, Ga.; J. F. Baldwin, Birmingham, Ala.; Charles B. Duke & Co., New Orleans, La.; A. B. Meyer & Co., Indianapolis, Ind.; William Mollering Sons, Ft. Wayne, Ind.; G. W. Soontag, Evansville, Ind.; T. W. Spiuks, Covington, Ky.; M. M. Allen, Newport, Ky.; F. P. Young, Bay City, Mich.; Manitowoc Land and Fuel Company, Manitowoc, Wis.; Sheboygan Lime Works, Sheboygan, Wis.; Barnes Bros., Chattanooga, Tenn.; Wright Lime and Cement Company, Memphis, Tenn.; C. W. Goetz Lime and Cement Company, St. Louis, Mo.; Central Manufacturing Company, Roanoke, Va.

The Superior Portland Cement Company have erected twenty cottages at the plant and will put up about seventy more in the near future. These will be occupied by the employees of the company.

### A Suggestion for Reducing Cost.

The various improvements which are taking place from time to time in all branches and departments of the concrete industry, the infusion of new ideas, and the more effective execution of old ones, are bringing both initial and ultimate costs lower and lower each year. Conditions which at present obtain warrant placing the estimate for a concrete structure at a figure nearly identical with that of heavy timber mill construction.

Contractors whose work has been such as to make for success are constantly so systematizing their work as to benefit future construction from past experience. Wooden forms have always proved a large factor in the cost of concrete buildings. In order to reduce the cost of such forms, in so far as may be consistent with proper execution of the work involved, the Frank B. Gilbreth organization has instituted the practice of constructing working models, made on a scale of  $\frac{1}{8}$  inch to the inch, showing the latest and best practice, and the most economical jobs that this organization has erected. Such models have been sent to a new job to be inspected, together with a notice to the effect that prizes up to \$25



C. F. HARWOOD,  
Sales Manager at the Head Office, Charleston, W. Va.

would be given to the workman offering such suggestions as may cut down the cost and labor on materials; make for greater speed in constructing or in taking down forms; prolong the life of forms, thus increasing the salvage at the completion of the given job, or permit forms to be taken down with the least possible jar to setting concrete.

The last item in particular is of especial importance and has often been neglected by engineers, devoting their efforts in full or in part to work along reinforced concrete lines.

Such a method has also been found to give the benefit to this contractor's organization of the ideas of all the form builders who have been at any time in the employ of other contractors. Incidentally it affords the further benefit of an intelligent interpretation of local conditions by local carpenters.

The latter factor often completely upsets the most economical ideas in forms designed in another part of the country, because of the impossibility of getting form lumber in the usual standard sizes.

A reinforced concrete dam is being built at Salem, Mass., at an estimated cost of \$15,000 for the Boston and Northern Street Railway Company. The contractors are the Charles R. Gow Company, Boston.



JOSEPH M. HILAND,  
Travelling Representative, Charleston, W. Va.

M. L. Sternberger, the vice-president, is also president of the Superior Coal Company of Jackson, Ohio. He is largely identified with business interests in Southern Ohio, and is one of the most prominent and progressive men in the State.

J. A. Latham, of Charleston, is secretary and treasurer. He is a native of West Virginia and is identified with various enterprises in that State.

J. B. John, the energetic manager, is a practical cement man, having been in the business a number of years, and he is thoroughly conversant with every phase of it. Mr. John was connected with the Lehigh Portland Cement Company for twelve years, and has had experience in their several different plants. He has already shown his managerial ability by the way in which he has pushed the work and superintended the erection of this gigantic plant. The company made a wise selection when they chose Mr. John for manager. He is the right man in the right place.

C. F. Harwood, sales manager of the company, will preside over the sales office, which will be located at Charleston, W. Va. He has been connected in a similar capacity with a Pittsburg firm. Mr. Harwood, as well as Charles Schmutz and James M. Hilands, traveling representatives, have covered in the past few months the greater part of the territory in which the company contemplate establishing a trade. The results have been highly satisfactory, and orders



J. B. JOHN,  
Manager of the Works at Superior, Ohio.

## Side Talk

### Up-to-Date Light Derricks.

The Parker Hoist and Machine Company, 971 North Francisco Avenue, Chicago, are manufacturing what many consider the handiest, most convenient, economical and up-to-date derrick upon the market, to which thousands of contractors, bridge builders, railway, mine and other large companies who have light lifting to do, are ready to testify.

The Parker ranges in capacity from 1,500 to 4,000 pounds. The booms, or reach, vary from 12 to 30 feet. They can also be used to great advantage when mounted upon a small car or truck which is sometimes furnished.

These derricks are the outgrowth of years of earnest effort by engineers in this line. Under the most trying conditions they have emerged triumphant. In their evolution and perfection contractors and other users have played no small part, and the manufacturers attribute much of the success they have achieved to practical suggestions received by them. They endeavored to adapt and develop these practical ideas, to improve parts found wanting and make changes wherever found necessary or advantageous. The result is the modern and up-to-date Parker derrick, now a model of simplicity, consisting of very few parts, namely:

1. Cross base with center post braced by four steel braces and provided with a cast thimble on which rests the frame of the machine.
2. The frame with gears, drum and brake. This part is slipped upon the center post of the base.
3. Mast with necessary guys.

4. Boom with necessary cables and blocks.
5. Small winch strapped to mast for operating the boom. This is needed only when lifting more than 1,000 pounds.

Every part entering into the construction of these derricks is made of the very best materials obtainable. All shafts are steel, and the bearings are babbitted with genuine babbit. The machines are guyed with four guy lines and turn a full circle.

The company also manufacture a complete line of hoisting engines, derricks, cranes and hoists and are at present engaged in the building of several large derricks electrically driven for the Chicago City Railway Company, Chicago; also a large electric hoist for the T. Cummings Foundry Company of Chicago, together with an immense amount of miscellaneous orders such as engines, cranes and derricks.

### Crushing Strain on Concrete Blocks.

That concrete blocks properly made are capable of withstanding enormous crushing strain is borne out in the following tests made by Professor Crocker of the Mechanics' Institute, Rochester, N. Y. A block made on "Hercules" machines by Palermo Bros., Mount Morris, N. Y., containing 126 square inches, total area—net area, deducting air space, 100 square inches—crushed at 181,000 pounds, which is equivalent to 1,436 pounds per square inch total area and 1,810 per square inch net area.

A second test was made with block produced on a Hercules machine operated by J. F. Norris, Brighton, N. Y.; size of block, 8x12x24. This block was subjected to 200,000 pounds crushing test and refused to break. The limit of the testing apparatus having been reached, it was impossible to learn how much additional weight would be required to break the block.

The two blocks submitted were regular stock blocks made of good material mixed with a 2 to 1 facing and a 5 to 1 backing. According to Hercules methods a sufficient amount of water had been used when the blocks were made to insure perfect chemical action.

ONE of the neatest and most compact of recent books is the Directory of Portland Cement Manufacturers of the United States, compiled and published by C. Earle E. Bottomley, secretary of the Association of American Portland Cement Manufacturers, Land Title building, Philadelphia. The directory contains the names and location of some 170 Portland cement works in this country, corrected to August 1, 1907, with officers, capitalization and output of the respective companies, both those now in actual operation and contemplated during 1908. The book is neatly bound in leather, of vest pocket size, and well worth the price of \$1 per copy.

THE Sandusky Portland Cement Company, manufacturers of Medusa water-proof compound, report furnishing their water-proofing material for the new plant of the Michigan Refrigerator Company, Grand Rapids, Mich. The material is being used in the reinforced concrete dam being built by the Delaware, Lackawanna & Western Railway coal department at Scranton, Pa., and it was also used in the A. Booth & Co. cold storage plant at Detroit, Mich. The Atchison, Topeka & Santa Fe Railway is using an immense quantity at Albuquerque, N. M., and Summerville, Tex. Albert Kahn, architect and president of the Trussed Concrete Steel Company, Detroit, Mich., who is the inventor of the Kahn system of reinforced concrete, used the material throughout the construction of his private residence just completed.

THE ALLIS-CHALMERS COMPANY, Milwaukee, Wis., have just issued Instruction Book No. 5004, containing directions for erecting the well known Gates elevators and also much matter of general interest. Many users of elevators in stone crushing plants and elsewhere have trouble with their elevators through the omission of such simple precautions as those here outlined. Such will do well to write to the Allis-Chalmers Company for this valuable publication.

THE latest concrete building block machine on the market is the "Lightning," manufactured by D. F. Detrick, Dayton, Ohio. This machine, which has been tried and tested for over a year, has a capacity of 500 blocks per day. Mr. Detrick claims that a greater variety of stones can be made on this machine in less time than any other.

## Business-Getting—A Suggestion

COMBUSTION UTILITIES COMPANY  
60 WALL STREET

ROCK PRODUCTS,

355 Dearborn St., Chicago, Ill.

Gentlemen:

Please cut off the next two months' advertising of this company and allow the same to apply on an extension of our yearly contract. We are fairly "snowed under" with inquiries, and owing to a complete reorganization of our engineering staff we cannot begin to attend to our installations, leaving out of the question the answering of all possible clients.

We are more than pleased with the advertising results from "Rock Products." In fact, the writer, who has had years of experience in the advertising field, can assure you that we are getting more solid results and more inquiries from 355 Dearborn Street than from all the other journals combined with whom we advertise.

Very truly yours,

COMBUSTION UTILITIES COMPANY

By E. W. Dunning, Acting General Manager.

New York, Sept. 13th, 1907.



A RECENT municipal structure in which Raymond concrete piles were used in the foundation work is Public Bath No. 1, at Fourth Avenue and President Street, Brooklyn, N. Y. The architect is Raymond F. Almirall.

THE use of concrete piling is being specified more and more commonly in the erection of structures in and about New York. A recent example is the branch of the Carnegie Library now in process of construction at 742 Tenth Avenue, where the product of the Raymond Concrete Pile Company, of 71 Nassau Street, is being used. The architects are Messrs. Babb, Cook and Willard.

"CONCRETE COTTAGES" is the title of a 16-page folio pamphlet published by the Atlas Portland Cement Company, 30 Broad Street, New York. This

is a partial reproduction by special permission of the competitive designs submitted for the "Concrete House Competition" of the Association of American Portland Cement Manufacturers, Philadelphia. It shows several types of concrete cottages together with floor plans and specifications and the comments of the committee which awarded the prizes. Readers of ROCK PRODUCTS may obtain a copy of this valuable folio by writing to the Atlas Company.

THE STANDARD ROLLER BEARING COMPANY of Philadelphia has recently made many large additions to its plant and now has the largest works of its kind in the world. The buildings extend over half a mile of ground from end to end, having a floor space of over 500,000 square feet, the concern now employing over 1,500 men. The business has grown to such proportions as to necessitate the establishing of a

thoroughly organized department of publicity. The new department will be conducted by Mr. C. Dickens Sternfels, who has been identified in a similar capacity with the Arthur Koppel Company, Pittsburgh, for the past three years. Mr. Sternfels assumed charge of the Standard Roller Bearing Company's publicity department on September 16 and is located at Philadelphia, Pa.

"CRUSHING ROLLS" is the title of the Allis-Chalmers Company's bulletin No. 1412. It contains very complete tables of dimensions and lists of parts. The latter will, of course, greatly facilitate the ordering of repair parts and, in view of the thousands of these rolls made by the Allis-Chalmers Company and its predecessors in the mining machinery field, namely Frazer & Chalmers and the Gates Iron Works,

## CLASSIFIED ADVERTISEMENTS

Advertisements will be inserted in this section at the following rates:

For one insertion ..... 25 cents a line  
For two insertions ..... 50 cents a line  
For three insertions ..... 60 cents a line

Eight words of ordinary length make one line. Heading counts as two lines.

No display except the headings can be admitted.

Remittances should accompany the order. No extra charges for copies of paper containing the advertisement.

### EMPLOYEES WANTED

#### SALESMAN

Wants position in cement or kindred lines—have had five years selling experience. Well posted on building material. Address "BOX 129," care ROCK PRODUCTS.

#### FIFTY QUARRYMEN WANTED.

Wages \$1.54 per day, with board and lodging. Excellent locality. JAMESON LIME CO., Tehachapi, Cal.

#### CEMENT MILL MANAGER OR SUPT.

Open for engagement. A mechanical engineer with 12 years' experience in the care and management of cement plants. Thoroughly competent. Highest references as to character and ability. Address "BOX 131," care ROCK PRODUCTS.

#### SUPERINTENDENT WANTED.

For first-class lime plant who thoroughly understands the burning of lime with natural gas, to take charge of manufacturing department. E. G. POTTER, Andrus Bldg., Minneapolis, Minn.

#### WANTED.

A man of intelligence and experience to take charge of a battery of continuous lime kilns; new; oil fuel. Address WESTERN CALCIUM COMPANY, 430 California St., San Francisco, Cal.

#### WANTED.

A young married man who knows the plaster and cement business to travel in Pennsylvania and western New York. Address "HAMILTON," care ROCK PRODUCTS.

### EMPLOYMENT WANTED

#### WANTED.

Position as traveling salesman, either lime, wall plaster or cement. Am practical man, have had several years of road work. A hustler. A No. 1 reference. Address "BOX 130," care ROCK PRODUCTS.

#### CEMENT MILL SUPERINTENDENT.

Desires change of location. A mechanical and electrical engineer, experienced in design, erection and operation of power plants. Successful handler of men. At present with oldest cement works in the middle states.

### BUSINESS OPPORTUNITIES

#### FOR SALE

Or will join with proper parties in erecting brick or sewer pipe plant on a 60-acre tract of the best clay and shale lands in the state of Illinois. Shale will make sewer pipe, paving or face brick. From 60 to 80 feet of shale and from 8 to 15 feet of the very best Illinois fire clay. Rate 60c to Chicago. Will have Iowa, Wisconsin, northern Indiana and Illinois for market. Address "BOX 444," care ROCK PRODUCTS.

#### WANTED

Man who wants to come South with \$5,000 to invest. One with mechanical knowledge of quarrying and building preferred. First class opportunity. Address ATLANTA CONCRETE MACHINERY CO., Atlanta, Ga.

#### LIMESTONE DEPOSIT

At

Huntsville, Ala. Has unlimited supply of fine quality of UNDEVELOPED LIME AND CEMENT ROCK.

We offer inducements to those who will develop these industries in this section.

We have lately struck NATURAL GAS, which we expect soon to have available for manufacturing purposes. We also have the best climate in the United States, and an unlimited supply of pure spring water.

COPY OF OUR STATE GEOLOGIST'S ANALYSIS OF THE ROCK AND ALSO GOVERNMENT SOIL SURVEY UPON APPLICATION.

For further particulars address

SECRETARY OF BUSINESS MEN'S CLUB, Huntsville, Ala.

### MACHINERY FOR SALE

#### FOR SALE.

One No. 2 American Clay Machinery Company's Giant Brick Machine.  
One No. 2 Austin Gyrotory Crusher.  
One Noyes Bolting Machine.  
One 8x10 Double Gould Vacuum Pump.  
NEW YORK LIME COMPANY, Natural Bridge, N. Y.

#### FOR SALE CHEAP.

New Ruggles-Cole sand drier, in good order. Large capacity, 45 feet long, 6 feet in diameter. Have changed system making sand lime brick; now use silos. Do not need drier. A bargain for someone. J. E. BARTLETT CO., Jackson, Mich.

#### COMPRESSOR, DRILL, ETC.

One 540-ft. McKiernan compressor.  
Two 3 1/2 McKiernan drills.  
One No. 4 Austin crusher with elevator, boiler and engine. EDWARD HELY, Cape Girardeau, Mo.

#### FOR SALE.

Mr. Edward J. Kane, a dealer in building materials at 260 Front street, New York, reports a brisk demand for all kinds of supplies and says that the prospects are for a very favorable season in building and contracting lines. Mr. Kane has a large contractor's equipment for sale which has been used to some extent, which he offers for sale at a very small price. His advertisement will be found on another page of this paper.

#### FOR SALE—ENGINES AND BOILERS.

##### BOILERS.

4—72x18, horizontal tubular, high pressure.  
1—84x18, horizontal tubular, standard.  
1—78x16, horizontal tubular, standard.  
1—72x18, horizontal tubular, standard.  
5—72x16, horizontal tubular, standard.  
1—66x16, horizontal tubular, high pressure.  
1—60x18, 6" riveted flue, standard.  
3—60x18, horizontal tubular, standard.  
Sixty others, all styles and sizes.

##### ENGINES.

20x46 Wheelock.  
18x42 Hamilton.  
18x36 Wright.  
16x32 Buckeye.  
18x26 H. S. & G.  
16x20 Brownell.  
14x20 Atlas.  
14x14 Vertical.

Forty others, all sizes and styles. Also pumps, heaters, tanks, sawmills and general machinery. Send us specifications of your wants.

THE RANDLE MACHINERY CO., 1745 Powers St., Cincinnati, Ohio.

#### FOR SALE.

New 9x14 Vulcan dinkies at..... 2,500.00  
New 10x16 Vulcan dinkies at..... 3,000.00  
New 1-yd. clam shell bucket (for sand)..... 375.00  
Lidgerwood No. 71 hoist, complete..... 800.00  
Little Giant 1 1/2-yd. traction shovel..... 3,250.00  
No. 2 Smith mixer, engine and boiler on wheels..... 675.00  
Marion Model 60 shovel (new)..... 9,400.00  
Bucyrus 70-ton shovel (new)..... 9,900.00  
New 10-ton American Tandem roller..... 1,500.00  
54x54x16-ft. stone planer..... 950.00  
Gates No. 5 gyrotory crusher..... 850.00  
Sullivan channeling machine (new)..... 1,900.00  
6x10 Vilter belted compressor, 34-ft..... 110.00  
12x12x14 Hall air compressor..... 650.00  
12x12x14 Ingersoll compressor..... 725.00  
Morris No. 10 D. C. pump and engine..... 500.00  
Channon full-circle 1 1/2-yd. excavator..... 4,000.00  
Let me have your inquiries for Cbleways, Cars, Rail, Rock Drills, Channelers, Traction Engines, Graders and Contractors' Equipment generally.  
WILLIS SHAW, 171 La Salle St., Chicago, Ill.

#### NO. 2 EMERSON STEAM PUMP.

For sale—First-class condition; used only one month; no further use; listed 415 gallons.

E. B. ALVORD & CO., Jamesville, N. Y.

### PLANT FOR SALE

#### FOR SALE.

First-class stratified limestone quarry in southern Indiana. Fully equipped to produce 300 cubic yards of crushed stone daily, also curbing, flagging and cut stone. This is a money maker, but present owner must curtail work on account of other demands on his time. Address R. B. PARSONS, Room 2, Temple Court, Eighth and Plum Sts., Cincinnati, Ohio.

#### FOR SALE.

Either one-third or contracting interest in plant now making brick, mining coal and soon to build Portland cement plant. Position as manager goes with sale. Address "CEMENT-COAL," care ROCK PRODUCTS.

#### A SPLENDID OPPORTUNITY

For the right parties. Never before offered to the public. Seven acres land, large marble quarries, 2 large buildings, 3 lime kilns, capacity 30 tons per day; boilers, engines. Mills with output 25 tons per day marble dust. Private rail track into plant. Plenty water. Highest class artificial ornamental stone is made of this material by others—why not you? A fine hydrate lime proposition. Plant now in operation with fair established trade. The present owner is a large real estate man and is not interested in the possibilities of this line.

Think of this—only 15 miles from the heart of New York City—54 trains per day. This is certainly the lime man's chance, especially the western man. Address SUPERINTENDENT, BOX 512, Tuckahoe, N. Y.

#### ALABAMA LIME WORKS.

Operated daily, including 500 acres limestone and timber lands.

LOUISIANA BUSINESS CO., New Orleans, La.

### AVONDALE MARBLE DUST

Fine Ground Tube Mill Process

FRANK WILLIAMSON

2202 Chestnut St., Philadelphia

Sample package of 200 lbs. sent on receipt of 40 cts. Bulk, Carloads, \$2.50 per ton, bagging extra.

W. D. MEYER,

Manufacturer of

Marble White Lime

115 Delaware Street, QUINCY, ILL.

**A D B****What Does it Mean?****Not "a Bum Dam"**

Guess it and get your bill discounted 7%. If you can't guess, write and find out.

**A-D-B, care of Rock Products****Peirce  
City  
White  
Lime****THE CAPPON PROCESS**

(CALCIUM CHLORIDE SYSTEM)

FOR MAKING

**Hard Plaster, Artificial Stone and Marble, Etc.**

Without the use of gypsum, is of interest to all lime manufacturers

**THOMAS W. CAPPON, Patentee**

No. 881 E. 141 Street

**NEW YORK**

Before placing your order for any of the following articles it will pay you to communicate with the undersigned and secure their prices.

**Treads**                      **Urinal Stalls**  
**Risers**                      **Laundry Tubs**  
**Platforms**                  **Sinks**  
**Blackboards**              **Tiling, Etc.**

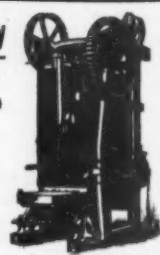
**The Penna. Structural Slate Co.,**  
ARROW BUILDING, EASTON, PA.

**Clay Working Machinery**

Yard Supplies of all Kinds

**CEMENT MIXERS**  
**ELEVATORS**  
**CONVEYORS**  
**DRY PANS**  
**CRUSHERS**  
**BARROWS AND**  
**TRUCKS**

Steam or  
Animal Power  
Brick  
Machinery



"MARTIN"  
DRAWER 887  
LANCASTER, PA.

**Farrington Expansion Bolts**

The most secure fastening in concrete as well as in stone.  
Send for samples. **H. Farrington, 45 Broadway, New York.**

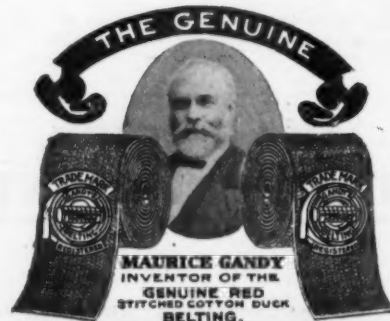
**CORE DRILLING**

FOR

**QUARRY AND MINERAL PROPERTY**

I am prepared to make complete investigations  
and reports. Write for prices.

**A. T. THROOP, Consulting Engineer,**  
NIAGARA FALLS, N. Y.



**GANDY**  
PATENTED 1877

The Gandy Belting Co.,  
Baltimore, Md.  
Gentlemen:—We would further state that we  
have run a Gandy 8-ply belt as a crossed belt  
in a stone crusher for one year, and after tak-  
ing it off the machine have used it in another  
place with excellent results. The life of a  
leather belt in the same place under similar  
conditions was three months.  
Yours very truly,  
The Washington Asphalt Block & Tile Co.,  
By J. F. Heffer, Supt.

And Gandy Belts Cost One third as Much as  
Leather Belts!

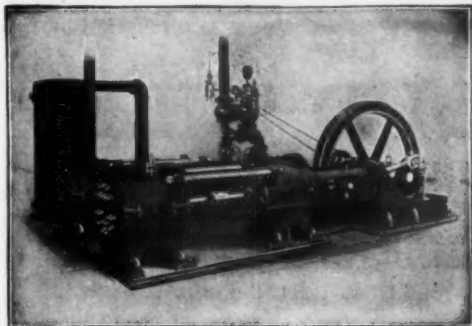
**THE GANDY BELTING CO.**  
BALTIMORE, MD.

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Combine Correct Mechanical Practice with the Latest Developed Knowledge of Air Compression.

Made in More than 100  
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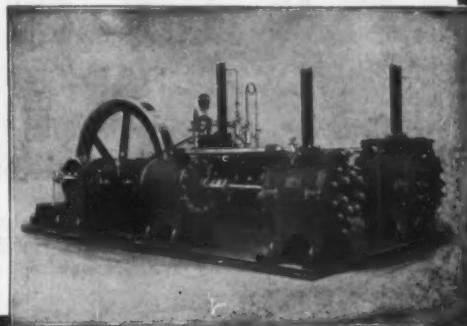
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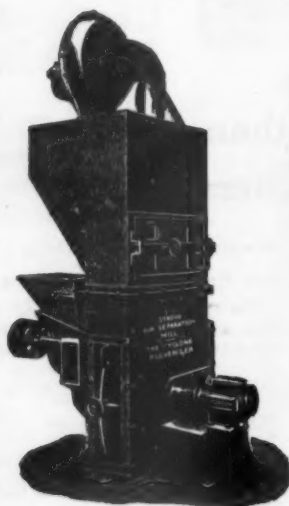
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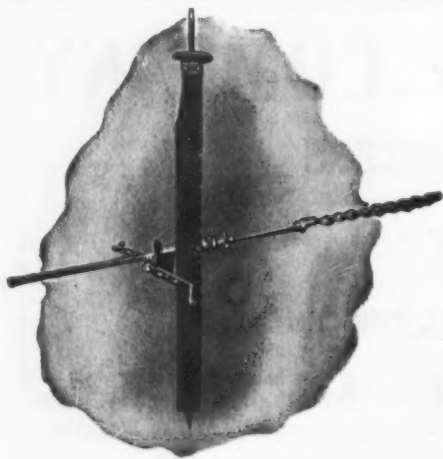
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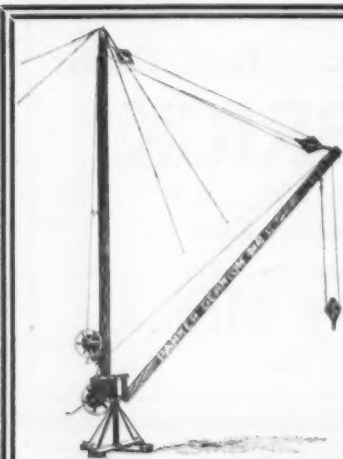
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Save 75 Per Cent. of the Cost by Using a

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Enormous Economy Guaranteed on Every Job when used for the Construction of **Foundations, Basements, Cellars and Retaining Walls.** Substantial Contractors are Invited to Investigate. Address Machinery Department.

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We make the Hercules Concrete Block Machine in two sizes.

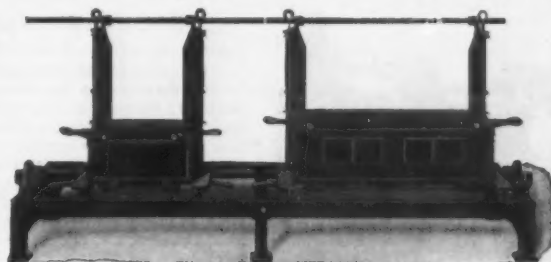
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will make blocks from two inches up to six feet; it will make water tables, steps, window sills, lintels, etc., and make them as they should be made—as solid as the rock of Gibraltar.



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The Hercules Machines are making the blocks that are going into the finest concrete buildings in the world. We will be glad to send our catalog to any reader of this paper upon request.



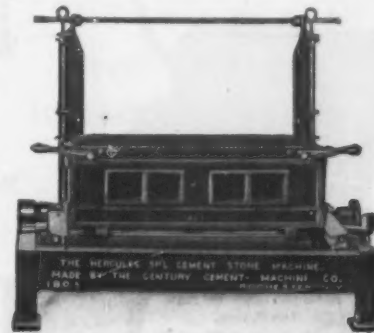
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### THE HERCULES SPECIAL

is a smaller machine than the Hercules Regular, but it is built exactly on the same lines and its mechanical action is identical with the large machine.

The Hercules Special will make just as good blocks—just as handsome blocks—as the Hercules Regular, but it will not make as large a block—that's the only difference.

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## The Sanders Brick Machine

For making sand and cement brick, sand and lime brick, any brick, all shapes and sizes. This machine makes the finest face brick of any machine on the market; every brick is perfect with fine, smooth face and sharp, square edges, every brick a pressed brick. This machine makes plain brick, ornamental brick, molded brick, all shapes and sizes, building blocks, rock face, tool face, panel face, plain face with V joint and brick face, fancy belt courses, corner blocks, combination brick cornice, fine porch columns, porch piers, lattice work, wall trimmings, chimney tops, paving block, archways, wainscoting and tiling for vestibules and hallways, stair steps and risers figured and paneled, for inside and outside stairs, also many figures in terra cotta work can be made on this machine, and made any color by using the chemical coloring.

Two men can make 4,000 to 6,000 brick a day, 1½ bbls. of cement to 1½ yds. of sand will make 1,000 good brick; 2 bbls. of cement to 1½ yds. of good, fine sand will make 1,000 fine face brick, style and variety of work unlimited. It pays every time to buy the best machine. With good sand and good cement you only need one of our machines to make the best and finest cement work that can be made. Send for our catalogue in which you will see cuts made from work on this machine—seeing is believing—it is acknowledged by experts to be the best machine on the market for cement work. Be sure that you are right, then buy our machine which makes everything right.

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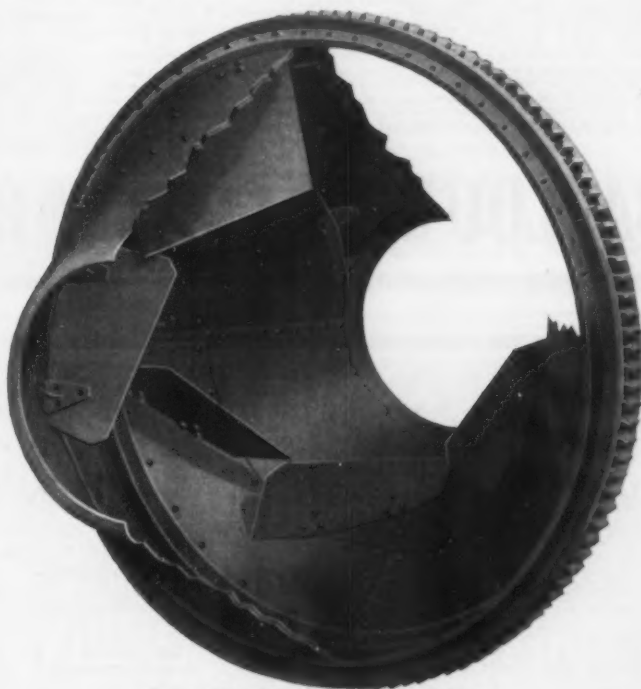


Smith Mixer on Truck with Steam Power.

IT'S EASY to remember the name, but that isn't the reason careful Concrete Engineers mention the **SMITH MIXER** in their specifications and insist on its being used in important concrete contracts.

Look at  
the Blades

Study this  
Picture



Interior View of the Smith Mixer.

The Smith Mixer  
is made in all re-  
quired sizes, and  
with any desired  
power equipment.

Send for illus-  
trated Catalogue.  
**IT'S FREE.**

The "Smith" doesn't merely slide, push or roll the material to be mixed. It cuts it apart with blades, lifts it up, pours it from end to end of the mixing chamber and forces it back and forth by a positive mechanism, giving it the greatest possible longitudinal movement. It does quickly with large quantities what no other machine or process can do quite so well even with small quantities. It is the perfection of mixing apparatus.

**The Quickest. Most Efficient. Most Durable. The Cheapest in the Long Run**

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RIGHTLY NAMED  
—IS THE—  
DEMOREST  
**Little  
Giant  
Mixer**

That was the unanimous expression of unbiased opinion at the Chicago Convention—WHY? Let the following speak for itself and remember that the Batch Mixer referred to is one of the best known:

GRAND RAPIDS REFRIGERATOR COMPANY.

Ballou Manufacturing Co., Belding, Mich.

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Gentlemen:—We have been using one of your power mixers for the past month and will say that we are greatly pleased with its operation. We are using at the same time an \$800.00 machine with steam power. The latter is a batch mixer, and we notice every time the men get a little lazy, they don't put in as much gravel as they ought to, which increases the necessary portions of cement. We also notice that in the operation of the batch mixer, four or five laborers are frequently waiting for the batch to be mixed, thus much time is lost; while with your mixer we can load up the wheelbarrows as they come around.

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C. H. L.  
H. D.

Very truly yours,

GRAND RAPIDS REFRIGERATOR CO.  
(By C. H. Leonard.)

Do You want to save that \$15 a day?  
If so, write for booklet to

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In our Warerooms of 33,000 Square Feet Area, we carry 40 different kinds of machines used in the Concrete Block Industry and Associated Work.

We have Hollow Block Machines from \$21.00 up, the prices varying according to the outfit and grade. They include the most perfect machines ever produced. Our several types of Concrete Mixers are the best that money will buy.

OUR OFFER:—In order that you may carefully examine our complete lines and choose just what you want, we will gladly pay your railroad expenses and practically operate any or all of the machines in our demonstrating department, then if we cannot satisfy you fully as to their merit and price we will pay your fares just the same.

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Write us to-day for our 80-Page Catalog. Department C.

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 Maple and Front Streets COLUMBUS, OHIO

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## The Standard Continuous Concrete Mixer

"The Mixer that Measures and Mixes."

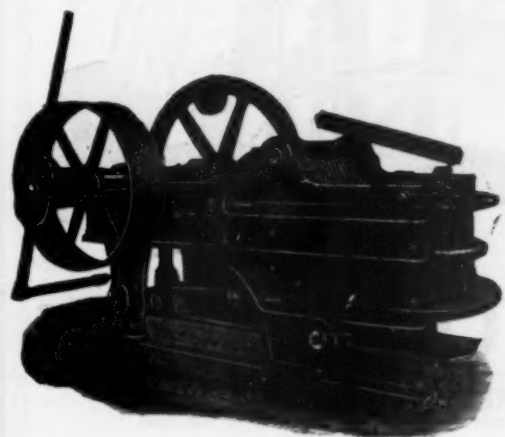
"You fill the Hoppers, the Mixer does the rest"

CONTINUOUS, AUTOMATIC, FEED EXACT PROPORTIONS.

Materials first Dry Mixed, then "Tempered." Output instantly variable from 0 to Maximum at will of operator, thus insuring fresh Material for each Block. Feeds Sand and Gravel Dry or Wet.

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for soft rocks, burnt lime, etc.

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Block and System of Insulated Walls

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Strength, Durability and Beauty.

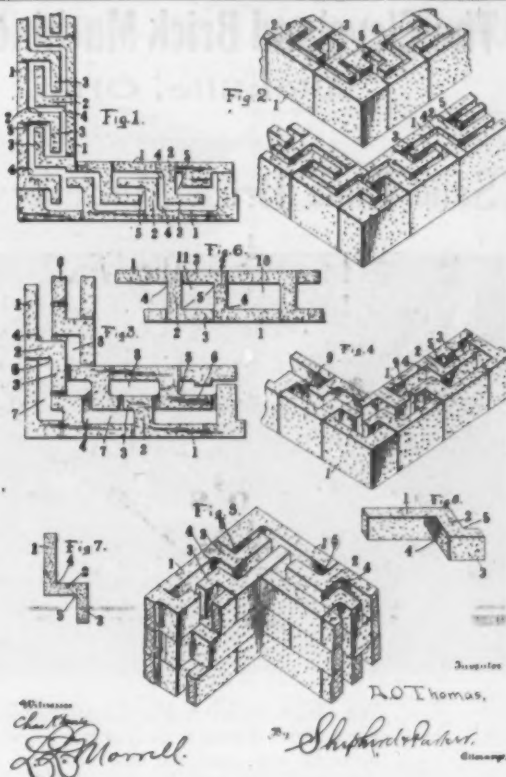
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**Perfection Concrete Mixers**

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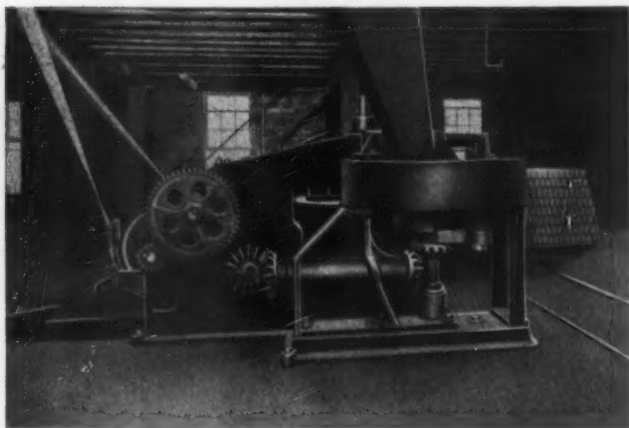
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Manufacturers of

**Sand Lime Brick Machinery Only**



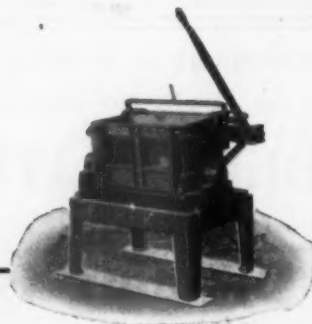
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Designers and Builders of Sand Lime Brick Plants.

Great Speed—

Every Block Perfect

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The only face down cement block machine that permits of the use of a wet mixture—withdraws the core **vertically**—after the block is turned over. One movement of the lever turns over the block—withdraws the cores and unlocks the mold box. Push back the lever and the box turns back and locks—the cores are inserted—absolutely automatically.

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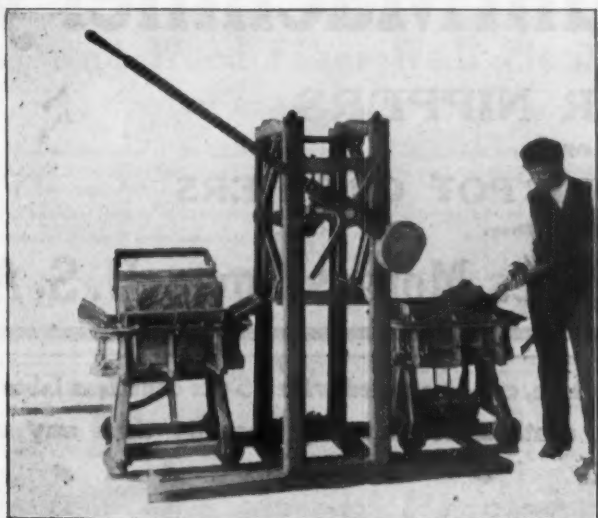
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BY USING THE

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AUTOMATIC SELF-LOCKING DOORS

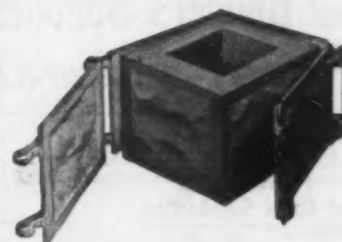
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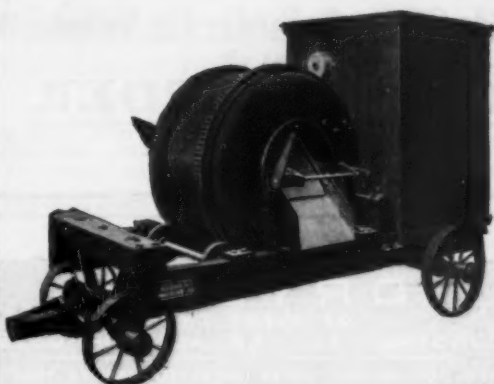


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Write for descriptive circular

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The drum of the Koehring Mixer is made with rounded edge on both heads and the shovels on inside extend from the cylinder with rounded corners. This means there is not a sharp corner in the drum where materials can lodge. It is the most effective and most rapid Batch Mixer built, is easier kept clean, has a lower charging hopper and discharges quicker than any other.

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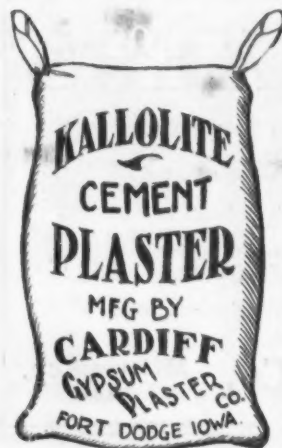
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Make Plaster that Gives Satisfaction.

Try a car and be  
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We have six mills and  
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## KALLOLITE CEMENT PLASTER

IS MANUFACTURED FROM  
THE PUREST GYPSUM ROCK  
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HARD BY NAME  
HARD BY NATURE  
HARD TO BEAT  
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IOWA HARD PLASTER CO., Ft. Dodge, Iowa.

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MANUFACTURERS OF

## STUCCO RETARDER

Quality, Price, Shipping Facilities, and Prompt Attention, Unexcelled  
by any. Drop us a line for Prices.



## DRYERS

OF EVERY TYPE

CONSTRUCTED FOR ALL PURPOSES.

AGENTS FOR BISHOP WATER JACKETED FURNACE FRONTS  
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H. L. Graf, Pres. E. T. Silder, Vice-Pres. & Gen'l Mgr. Osborne G. Reilly, Sec. & Treas.

## New Albany Wall Plaster Co.

(Incorporated.)

MANUFACTURERS OF

### Star and Wood Fiber Wall Plaster.

NEW ALBANY, IND.

We wish to announce to the trade that we are now running and at the present time, are in position to fill all orders promptly. Those who have used our goods claim it is the finest they ever had.

If you have not tried it, we are sure it would be to your interest to do so.

Prices always right and your orders solicited.

NEW ALBANY WALL PLASTER CO.,

Cumberland Phone 408.  
Home Phone 137.

NEW ALBANY, IND.

## THAT'S IT



**Cement Plaster  
Wood Fiber Plaster**

The Brand that's Made from Pure Gypsum Rock.

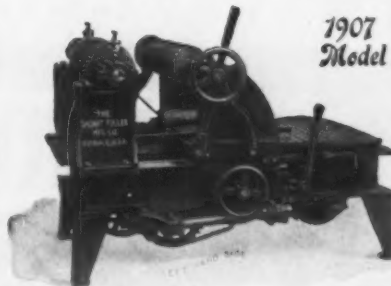
Correspondence Solicited.

MANUFACTURED BY

**The Plymouth Gypsum Co.**

FORT DODGE, IOWA

## The Leonard Wood Fiber Machine



1907  
Model

Has an Automatic, Proportional, Increasing Feed, which keeps grade of fiber uniform from start to finish, and holds machine to highest possible rate of production for the grade of fiber and number of saws. Does not begin with fiber and end with dust, nor fall off in rate of production on each log, from 40 to 80 per cent as do the ordinary non-increasing feed machines. Works logs up to 24x24 inches. No royalty string attached to sale. Pay no attention to misrepresentations of our competitors but write for descriptive circular and terms to

**The Shuart-Fuller Mfg. Co.**

Successors to

**The Elyria Machine Works,**

Elyria, Ohio

THE SHUART-FULLER MFG. CO., ELYRIA, OHIO

Gentlemen:—What is the very best, cash-with-order price you will make on another Leonard Fiber Machine? We want no other machine but yours. It is all and more than you claimed for it, and is running steady ten hours every day and doing fine work.

Yours truly, GUARANTY WOOD FIBER PLASTER CO., Chattanooga, Tenn

The

## COLOR

That Never Fades.

Tried out for 20 years. For Mortar, Brick, Cement, Stone, etc. Red, Brown, Buff, Purple and Black.

**Richeston Mineral Paint Works,**  
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# Empire Gypsum Co.

The Empire Gypsum Company's new mill, with capacity of 200 tons daily, is in operation and they are prepared to promptly furnish the best quality of Empire Stucco, Empire Neat Plaster, Sterling Wood Fiber Wall Plaster and Excelsior Wall Plaster Sanded.

**Garbutt, Monroe County, New York.**

THE FLOUR CITY

### "Continuous Air Space" Block Machine

HAS NO COMPETITORS, BECAUSE IT MAKES:

An Absolutely Moisture and Fire-Proof Block.

A Wall with Continuous Vertical and Horizontal Air Chamber.

A Block with Rock Face, Panel Face, Brick Face and Broken

Ashlar Face

Any Degree Angle Blocks, Arches, Water Tables and Fancy Cornice.

The Only Block Having Two Nailing Points Moulded in Every Stone

Will turn out 150 to 200 Blocks,  
in ten hours with two common men.

Write us to-day for Catalog, Special Proposition, Exclusive Rights, Territory, etc., etc.

AGENTS WANTED.

**THE FLOUR CITY CEMENT BLOCK & MACHINE CO.**

701 Sykes Block, MINNEAPOLIS, MINN.

CUMMER CONTINUOUS PROCESS

FOR

**CALCINING  
GYPSUM**

NO KETTLES  
USED

PLANTS IN  
OPERATION

Great Saving in Cost of Manufacture and Quality of  
Product Guaranteed.

**The F. D. CUMMER & SON CO., Cleveland, O.**

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for anything on the Material Dealer's Bill in Plastering Material—anything, from Lathing up to Finishing Plaster or Decorative Finishes—

### Mark This:

The Service here is Excellent  
 The Attention Courteous  
 The Quality Prime  
 The Preparation Perfect  
 The Serving Prompt  
 The Atmosphere Congenial  
 The Prices Normal

We have catered to the Building Material Trade for nearly half a century with the Highest Class of Goods and with "The Square Deal" policy.

### Get It Right

Dealers enjoy that comfortable sense of "getting things right" in handling United States Gypsum Company Products, and in putting them into the hands of the Builder and Contractor.

The Prestige of a House and the Reputation of its goods are Valuable Assets to any Dealer handling its products.

### Co-operation—Advertising

This Prestige and Reputation are enhanced by the Advertising we do. We co-operate with our Dealers in pushing our Products—supply them with snappy, up-to-date Selling Literature for each Product and Brand; booklets, mailing cards, etc., for the Dealer's use, imprinted with his own advertisement. Our advertising matter is exceptionally strong, bright and attractive—replete with "ginger" and selling force—it makes business for the dealer.

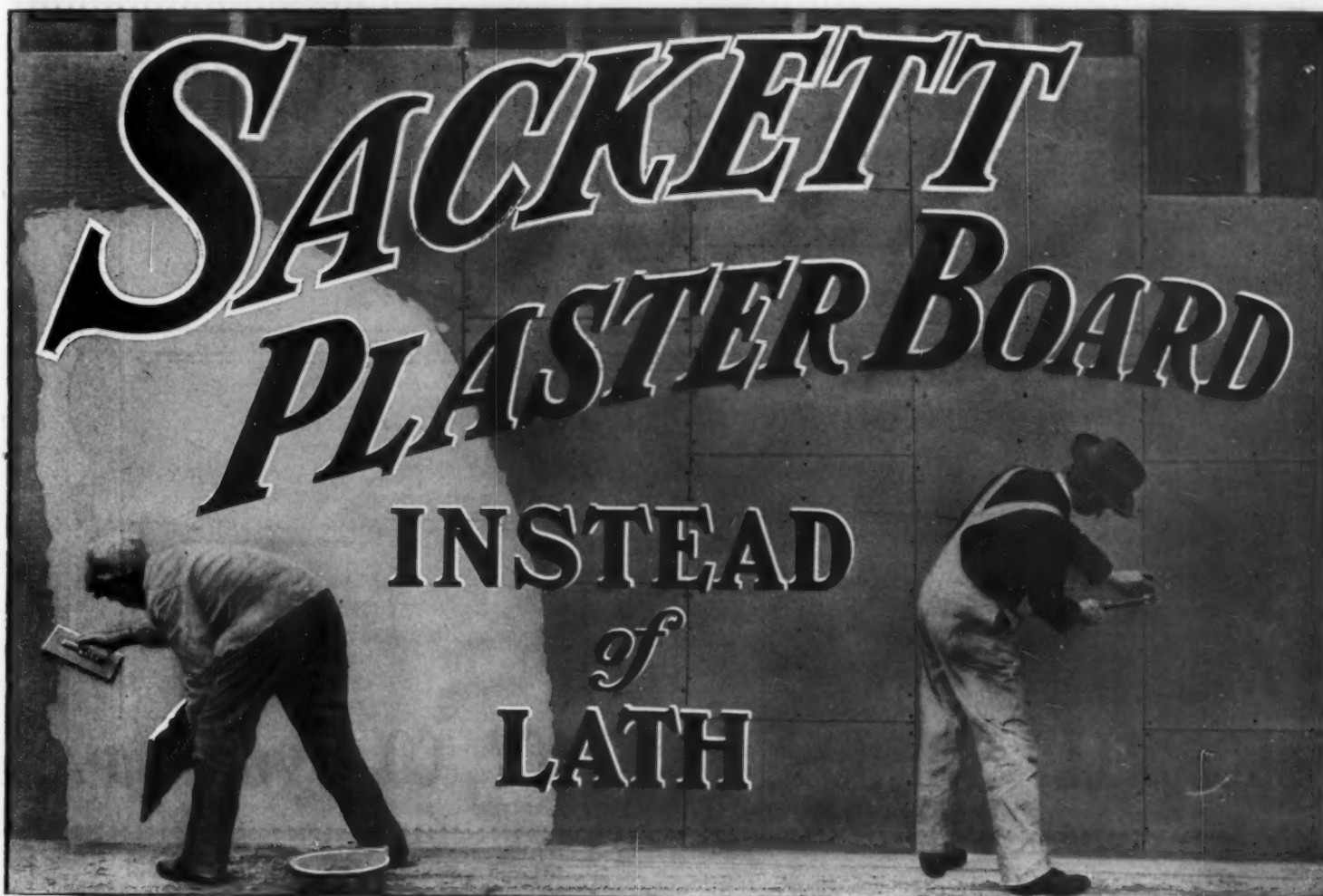
### United States Gypsum Company

Chicago

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Minneapolis





## FIRE-RESISTING WALLS AND CEILINGS

Sackett Plaster Board does the work of lathing, fire-proofing and partial plastering in one operation.

The cost is little or no more than good work on the ordinary, antiquated wood lath. *The results are quicker and better in every way.* Sackett Plaster Board comes in sheets 32"x36". These are nailed direct to the furring, studding or beams, and the finishing plaster applied. As compared with lath, less than one-half the quantity of water is required, thus giving a seasoned house in the shortest possible time. The finished Sackett Plaster Board wall and ceiling are fire-resisting and will never fall.

For fire-proofing it is also used under roofs, beneath outside sheathing, under floors and for protecting exposed wooden surfaces generally. The Owner, the Architect, the Builder, and the Landlord are interested in the economy and betterments of this construction. Carried in stock by up-to-date building material dealers everywhere.

A letter to any of the General Distributors named below will bring a Sample, a Booklet telling all about it, and name of nearest dealer, by return mail.

<b>UNITED STATES GYPSUM CO.</b>	<b>GRAND RAPIDS PLASTER CO.</b>	<b>SACKETT PLASTER BOARD CO.</b>
CHICAGO	CLEVELAND	MINNEAPOLIS
	GRAND RAPIDS, MICH	17 BATTERY PLACE, NEW YORK CITY.



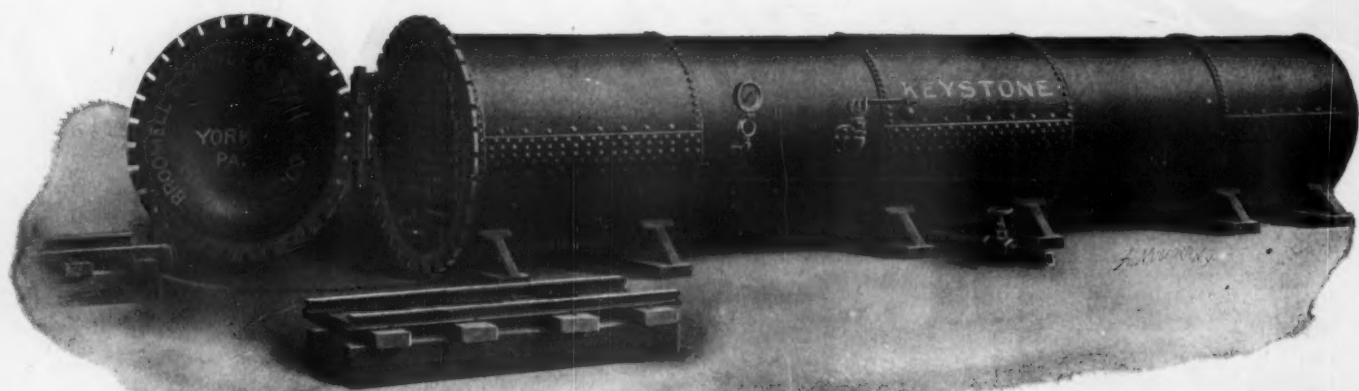
HOTEL GRISWOLD, NEW LONDON. 14½ Acres of Sackett Plaster Board used in its construction. B. W. Gibson, Architect.

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# Sand=Lime Brick Hardening Cylinders

BINS, ELEVATORS, CARS, HYDRATING MACHINES.

SPECIAL WORK OF ANY KIND BUILT FROM BLUE PRINTS.



**BROOMELL, SCHMIDT & STEACY CO., YORK, PA.**

## Sand=Lime Brick Machinery

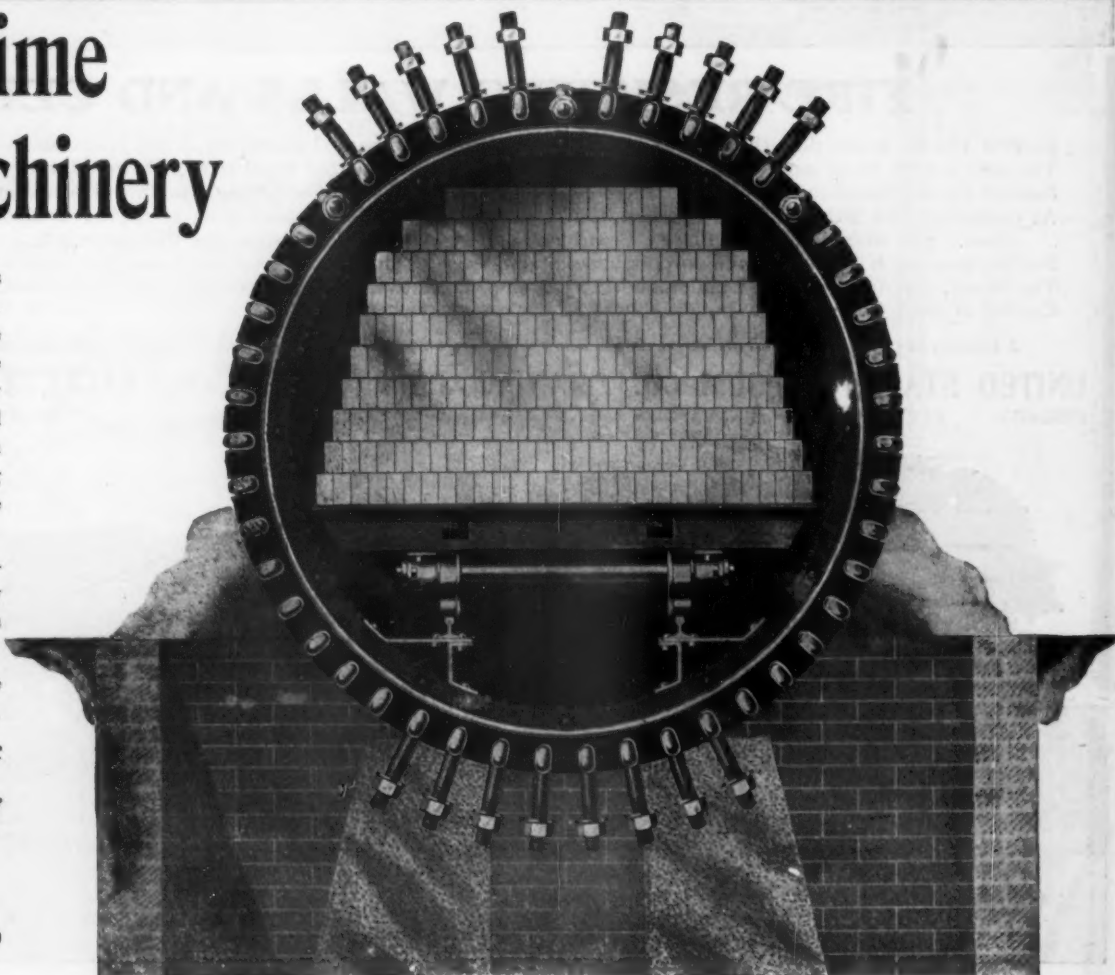
Our Sand=Lime Brick Machinery is at least a little better than any other. We have testimonials to show it. We build it all in our own factory and are sure of its quality. We are the only firm doing this. We will design and equip your entire plant or will sell you parts of your equipment. Our catalog describing and illustrating our full line will be sent upon request.

We also build a full line of machinery and appliances for making Clay Products, Cement and Pottery, Dryers and Dryer Apparatus.

Everything we sell we make. We therefore know its quality to be right.

**The American Clay  
Machinery Co.**

WILLOUGHBY, OHIO  
U. S. A.



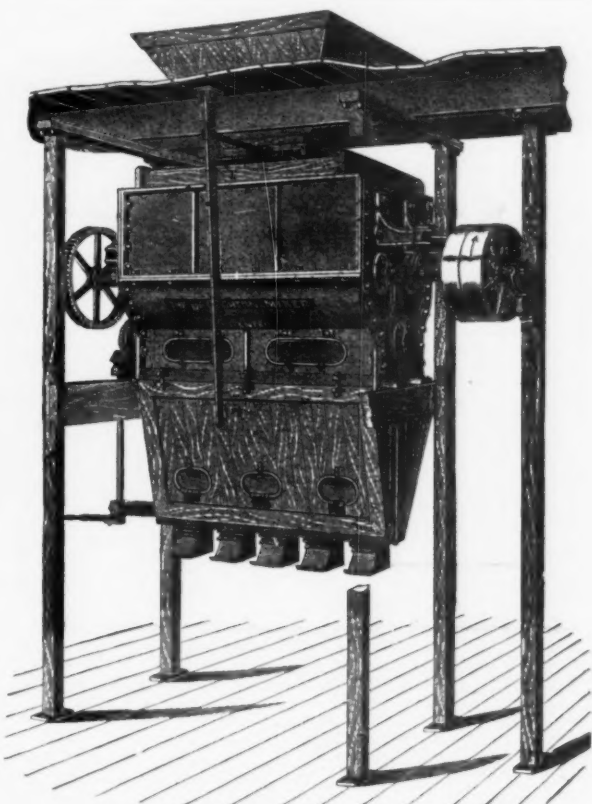
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The most thorough and efficient  
Mixers of Plaster, Cement and  
Dry Materials. Send for Circular.

**W. D. DUNNING, Water St., Syracuse, N. Y.**

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(OF JEFFREY DESIGN)

CONVERTED INTO A PICKING TABLE



(IN SOUTH AFRICA.)

**Elevating, Crushing, Screening, Convey-  
ing, Mining, Drilling**

Catalogs Free

Correspondence Invited

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U. S. A.

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Denver, Charleston, W. Va., Montreal, Can.



# SAND- LIME BRICK

We have had more experience in  
equipping, starting and operating SAND-  
LIME BRICK PLANTS than any other  
concern in this country, and we make  
**STRONGER GUARANTEES.**

**ALL MONEY REFUNDED** if brick made in regular work are not equal to samples submitted. No risks  
and no expensive experimenting under our method of installing plants. It is the **only safe method** for  
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Send for new book on "Uses of Sand-Lime Brick," just issued.

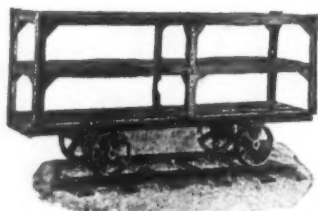
**American Sand-Lime Brick Co.,**

1306 Great Northern Building, CHICAGO.

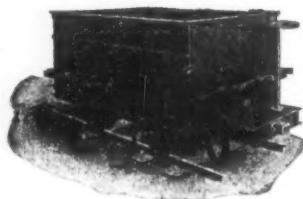
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SUBWAYS ALONE

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Do you require a better guarantee than the endorsement of the celebrated engineers who conducted these world famous enterprises?

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